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Volume 9 Number 2

SCIENCE

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
Luther H. Hodges, *Secretary*

OFFICE OF TECHNICAL SERVICES
John C. Green, *Director*

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*Descriptors marked with an asterik are listed in the subject index.

BIBLIOGRAPHY

EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS: BIBLIOGRAPHIC LISTINGS NO. 8. 31 Oct 62 [70]p. JPRS: 15966.
Order from OTS or SLA $6.60 62-33696

Contains bibliographic listings of authored articles appearing in 1961-62 issues of selected scientific and technical journals from Bulgaria, Czechoslovakia, Poland, and Yugoslavia.

DESCRIPTORS: *Bibliography, *Scientific reports, Bulgaria, Czechoslovakia, Poland, Yugoslavia.

EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS: BIBLIOGRAPHIC LISTINGS NO. 9. 6 Nov 62 [47]p. JPRS: 16053.
Order from OTS or SLA $4.60 62-33711

Contains bibliographic listings of authored articles appearing in 1962 issues of selected scientific and technical journals from Czechoslovakia, East Germany, Rumania, and Yugoslavia.

DESCRIPTORS: *Bibliography, *Scientific reports, Czechoslovakia, East Germany, Rumania, Yugoslavia.

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS.
Dec 62, 325p.
Order from GPO $12.00/year

This index is a record of the publications in languages spoken in the Soviet Union currently received by the Library of Congress and a group of cooperating libraries. It consists of three parts: Part A lists monographic literature published after 1944, with the title in the original language preceded by its English translation; Part B lists periodicals published after 1946; Part C constitutes a subject guide to both the monographs and periodical articles listed in Parts A and B.

AGRICULTURE

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 41. 30 Oct 62 [17]p. JPRS: 15957.
Order from OTS or SLA $1.60 62-33663

Partial trans. (excerpts) of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 8, p. 43-44; and Kommunist Belorussii (USSR) 1962 [v. 34] no. 7, p. 20-24.

DESCRIPTORS: *Industrial production, *Agricultural machinery, *Tractors, Earth moving equipment, Dehydrators, *Fertilizers, Production.

Contents:
The TDI-75 skidding tractor, by N. I. Korsunov
The semi-crawler mover for DVSSh-16 (T-16) self propelled chassis, by E. A. Rybal'chenko and V. N. Ovsyukov
The KAS-28 planter cultivator with operating organs, by K. F. Shcherbakov
The universal SZSB-8.0 and SZSB-4.0 drum type dryers, by N. K. Val'dner
Agricultural equipment and fertilizer production in the Belorussian industry, by G. Semenikhin.

Barrons, Keith Converse.
[METHODS AND COMPOSITION OF SUBSTANCES FOR THE CONTROL OF UNDESIRED VEGETATION]. [1962] 6p.
Order from OTS or SLA $1.10 62-16254

Trans. (starting with p. 2, col. 2, l. 7) of published Japanese patent 30-8098 (8098-1955) special appl. 4735-1953, by The Dow Chemical Co. (U. S.) appl. 18 Mar 53, notice 7 Nov 55.

DESCRIPTORS: *Herbicides, *Chlorides, *Propionic acids, *Metallic compounds, Plants, Growth, Pest control.

α, α-Dichloropropionic acid or its salts are distributed in a supporting medium.

Wolf, Calvin Newton and Ligett, Waldo Buford
FUNGICIDES WITH A 1, e-DIHALOGEN HYDANTOIN BASE. [1962] 18p.
Order from OTS or SLA $1.60 62-16241

Trans. of French patent 1,167,683, gr. 1, cl. 4, A 01 n, by Ethyl Corp. (U.S.) appl. 14 Feb 56, granted 18 Aug 58, pub. 27 Nov 58 (pat. filed U.S. 14 Feb 55).

DESCRIPTORS: *Fungicides, *Halogen compounds, *Hydantoins, Chlorine, Bromide, Pest control, Fungicidal coatings, *Cryptococcus, Aerosols, Plants.

Animal Husbandry

Burdelev, T. E., Zhil'tsov, V. G., and Demidova, N. V.
THE EFFECT OF FEED CONTAMINATED WITH ASPERGILLUS FUMIGATUS AND OF DECONTAMINATED FEED ON FOWLS. [1962] 5p.
Order from ATS $9.75 ATS-70P63R

Trans. of Mosk[ovskaya] Sel'skokhoz[yaistvennaya] Akad[emiya]. Dokl[ady] (USSR) 1961, v. 61, p. 235-241.

DESCRIPTORS: *Birds, Feeding, *Molds, Food, Contamination.

Kuo, F.
THE FUNCTION OF CORPORA ALLATA IN THE REPRODUCTION OF THE ORIENTAL MIGRATORY LOCUST (LOCUSTA MIGRATORIA MANILENSIS MEYER). [1958] 3p. 11 refs. MDF K-189.
Order from OTS $0.50 62-11307

Trans. of K'ô Hsueh T'ung Pao [Chinese Peoples' Republic] 1957, v. 1, p. 18.

DESCRIPTORS: *Grasshoppers, Endocrine glands, *Reproduction, Insects, *Hormones.

After removal of the corpora allata, the female locust lived normally, except that its ovaries and secondary glands were stunted. A normal female locust produces eggs which are dark yellow and 0.6 mm long. In locusts whose corpora allata was removed, the eggs were immature, 0.008-0.010 mm long, although mating was normal. Removal of corpora allata from the male locust reduced mating frequency and, although the sperm production was normal, the sex statistics of the offspring were reversed as the number of females exceeded the number of males.

Modyanov, A. V.
THE EFFECTIVENESS OF ENRICHING CORN SILAGE FOR DAIRY CATTLE AND SHEEP WITH UREA AND AMMONIUM SULFATE. [1962] 9p.
Order from ATS $12.00 ATS-13P64R

Trans. of mono. Vses[oyuznoe] Soveshch[anie] po Proizv[odstvo] Kukuruzy [All-Union Conference on Corn Growing, Krasnodar] 1960. [Sokrashchennye Materialy, Moscow] 1961, p. 470-481.

DESCRIPTORS: Effectiveness, *Food, Additives, *Cattle, *Sheep, *Corn, *Urea, *Ammonium radicals, *Sulfates, Feeding.

Plant Cultivation

Kontar', V.
A NEW WEAPON OF AGRICULTURAL AVIATION. 2 Nov 62 [12]p. JPRS: 16006.
Order from OTS or SLA $1.60 62-33707

Trans. of Grazhdanskaya Aviatsiya (USSR) 1962 [v. 19] no. 6, p. 5-6.

DESCRIPTORS: *Agriculture, *Pest control, Insecticides, *Aerosol generators, Agricultural machinery.

Tirelli, Mario.
PRESENT KNOWLEDGE ON THE DISINFESTATION OF STORED TOBACCOS, I. [1962] 19p.
Order from K-H $23.75 K-H 3280 b

Trans. of il Tabacco (Italy) 1952, v. 56, June, [no. 635] p. 178-179.

DESCRIPTORS: *Tobacco, Storage, Pest control, Insecticides, Rodenticides, Disinfectants.

ASTRONOMY

Astrophysics

Benevolenskii, A. M.
ROLE OF CUMULATIVE PROCESSES IN THE FORMATION OF LUNAR CRATERS. 22 Aug 62, 2p. AID rept. 62-122; AD-283 002.
Order from OTS or SLA $1.10 62-32777

Abstract trans. of Vsesoyuznoe Astronomo-Geodezicheskoe Obshchestvo. Byulleten' (USSR) 1962, no. 30(37) p. 20-27.

DESCRIPTORS: *Cratering, *Moon, Surface properties, Experimental data, Meteorites, Impact shock, Volcanoes, Extraterrestrial geography.

Chao, Chiu-chang.
THE DEVELOPMENT OF SPACE PHYSICS AND ITS FUTURE PROSPECTS. 6 Nov 62 [7]p. JPRS: 16044.
Order from OTS or SLA $1.10 62-33722

Trans. from Kuang Ming Jih Pao (Chinese People's Republic) 1962, 28 Aug, p. 2.

DESCRIPTORS: *Astrophysics, *Upper atmosphere, Atmosphere, Sunspots, Solar flares, Cosmic rays, Aurorae, Terrestrial magnetism, Magnetic fields, Satellite vehicle research, Electromagnetic waves, Absorption, *Space environmental conditions.

Bumba, V.
THE RELATIONSHIP BETWEEN CHROMOSPHERIC FLARES AND MAGNETIC FIELDS OF SUNSPOT GROUPS (Svyaz' Khromosfernykh Vspyshek s Magnitymi Polyami Grupp Solnechnykh Pyaten) tr. by Lorna L. Coppinger. Jan 59 [14]p. 19 refs. AmMetSoc-T-R-172+
Order from OTS or SLA $1.60 62-32232

Trans. of Akademiya Nauk SSSR. Krymskaya Astrofizicheskaya Obsevatoriya. Izvestiya, 1958, v. 19, p. 105-114.

DESCRIPTORS: *Solar atmosphere, Solar disturbances, *Solar flares, *Magnetic fields, Polarization, *Sunspots, Astronomical data.

From a comparison of the positions of 69 flares and the brightening of flocculi in 10 spot groups with the distribution of the magnetic polarity of the groups, it follows that: (a) flares in the first phase of their development occur generally on the boundaries of the polarities; (b) the main portion of the flare is usually anchored in the region where spots of opposite polarity approach closest to each other. The development of such a situation is sometimes observed to be connected with the occurrence of the flare, when a spot or several spots of opposite polarity develop suddenly; (c) the magnetic field determines the motion of the flares; (d) the second portion of the flare often originates in the "gulf" of the largest spot of the group; (e) about 30 per cent of the observed flares appear either simultaneously in two neighboring groups or at first in one and then in the second group with an interval of several minutes; and (f) the filaments sometimes lie on the boundary of polarity and sometimes occupy the place of flares. (Author)

Nikolaev, P. V.
A PHOTOELECTRIC SYSTEM OF AUTOMATIC TELESCOPE GUIDANCE. 27 June 62 [16]p.
FTD-TT-62-735; AD-283 875.
Order from OTS or SLA $1.60 62-32686

Unedited rough draft trans. of Sbornik Rabot po Voprosam Elektromekhaniki (USSR) 1960, no. 4, p. 189-201.

DESCRIPTORS: *Guidance, Celestial guidance, Automatic, *Telescopes, *Photomultipliers, Servo systems, Modulators, Amplifiers, Design.

BEHAVIORAL SCIENCES

Engelmann, Edith.
MEASUREMENT OF PERFORMANCE OF WORKERS IN MANUALLY OPERATED LONG-DISTANCE SERVICE (Arbeitskräftebemessung im Handvermittelten Ferndienst). 18 May 62 [8]p. JPRS: 13797.
Order from OTS or SLA $1.10 62-24703

Trans. of Deutsche Post (East Germany) 1962, v. 7, no. 2, p. 47-48.

DESCRIPTORS: Measurement, *Telephone communication systems, Human engineering, Personnel, East Germany.

Psychology

Gorbov, F.
PSYCHOLOGY OF COSMIC FLIGHT. 31 Oct 62 [11]p. JPRS: 15979.
Order from OTS or SLA $1.10 62-33695

Trans. of Aviatsiya i Kosmonavtika (USSR) 1962, [v. 44] no. 5, p. 22-27.

DESCRIPTORS: *Space flight, Psychology, *Sensory perception, Weightlessness, Information theory.

Schneider, J. A. and Sundermann, E.
SMOKING HABITS OF BERLIN PHYSICIANS. Oct 60, 19p.
Order from K-H $23.75 K-H 10324-d

Trans. of Ärztliche Wochenschrift (Germany) 1960, no. 7, p. 118-123.

DESCRIPTORS: *Cigarettes, *Smokes, Tobacco, *Medical personnel, Behavior.

Simson, T. P.
INFECTION PSYCHOSES (Infektsionnye Psikhozy). 1960, 15p. 41 refs. RSTP no. 160-60.
Order from OTS $0.50 62-11147

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1956, v. 56, no. 5, p. 389-394.

DESCRIPTORS: *Psychoses, Infections, Mental diseases, Pathology.

BIOLOGICAL SCIENCES

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 37 (BIOLOGY SERIES). 13 Nov 62 [12]p. JPRS: 16145.
Order from OTS or SLA $1.60 63-13072

Trans. of selected abstracts from Referativnyi Zhurnal, Biologiya (USSR) 1962, no. 4.

DESCRIPTORS: Abstracts, *Biology, *Plants, Physiology, *Animals, *Diseases, Morphology, Literature, China.

Sisakyan, N. M., Parin, V. V. and others.
PROBLEMS OF SPACE BIOLOGY AND PHYSIOLOGY. 7 Nov 62 [13]p. JPRS: 16083.
Order from OTS or SLA $1.60 62-33692

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1962 [v. 27] no. 2, p. 153-162.

DESCRIPTORS: Space medicine, Physiology, Scientific research, Biology, *Adaptation (Physiology), *Space environmental conditions.

Yazdovskii, V. I. and Baevskii, R. M.
MEDICO-BIOLOGICAL CONTROL IN COSMIC FLIGHT. 15 Nov 62 [14]p. JPRS: 16205.
Order from OTS or SLA $1.60 63-13098

Trans. of Akademiya Nauk SSR. Vestnik, 1962, [v. 32] no. 9, p. 9-15.

DESCRIPTORS: *Space medicine, Space flight, Control, Weightlessness, Biology, *Telemeter systems, *Data processing, Bioelectronics, Closed-cycle ecological systems.

The task of this article is to give a general idea of the character of radiotelemetric systems of medico-biological control in their current state i. e. the state in which they were utilized partim in the vehicles "Vostok-3" and "Vostok-4" and to indicate the ways of their improvement in view of the guarantee of bio-medical control in subsequent cosmic flights covering greater distances and having longer duration. (Author)

Anatomy and Physiology

SOVIET RESEARCH ON HYPOTHERMY DURING OXYGEN STARVATION AND ON NEUROSECRETORY ELEMENTS. 1 Nov 62 [46]p. 76 refs. JPRS: 15990.
Order from OTS or SLA $4.60 62-33694

Trans. of #Uspekhi Sovremennoi Biologii (USSR) 1962, v. 53, no. 3, p. 306-322 and 393-398.

DESCRIPTORS: *Hypothermia, Anoxia, Conferences, Neurology, *Endocrine glands, Secretion, Physiology, *Nervous system.

Contents:
On the role of "natural" hypothermy during oxygen starvation, and on the effect of low air temperature on its course, by E. V. Gubler
Symposium on the Problem: Neurosecretory Elements and their Importance in the Organism, Leningrad, 6-8 Dec 61, by A. A. Voitkevich.

Domyan, D.
PHOSPHOMONOESTERASES OF THE BRAIN IN PHYLOGENESIS OF VERTEBRATES [Fosfomono-esterazy Mozga v Filogeneze Pozvonochnykh]. [1962] 4p. (1 fig. omitted) 12 refs.
Order from OTS or SLA $1.10 62-14730

Trans. of A[kademiya] N[auk] SSSR. D[oklady] 1959, v. 126, no. 2, p. 442-445.

DESCRIPTORS: *Brain, Enzymes, *Phosphates, Esterases, *Animals, Fishes, Amphibians, Reptiles, Birds, Mammals

The activity of acid and alkali phosphatases in various parts of the brains of 15 representive vertibrate species was determined by incubating suspensions of the nervous tissue in the presence of a-Na-glycerophosphate. The amount of inorganic phosphorus liberated was taken as an index of enzyme activity. In general, the highest levels of alkali phsophatase activity are in the most functionally complex and phylogenetically youngest regions of the brain. The absolute magnitude of activity is highest in fishes, lowest in amphibians, and about equal in birds and reptiles. No definite distribution patterns, other than a high level of activity in the cerebella of warm-blooded animals, could be established for acid phosphatase activity.

Filatova, F. D.
SOME PROTECTIVE-ADAPTIVE MECHANISMS OF AIR-CARRYING PATHWAYS UNDER CONDITIONS OF AIR DUST POLLUTION. 22 Oct 62 [30]p. 49 refs. JPRS: 15823.
Order from OTS or SLA $2.60 62-33518

Trans. of Arkhiv Anatomii, Gistologii i Embriologii (USSR) 1962, v. 42, no. 6, p. 3-23.

DESCRIPTORS: *Respiratory system, Nose, Mucous membranes, Lungs, *Histology, Adaptation (Physiology), *Atmospheric pollution, Dusts.

Fukahort, Y.
ON THE GAS METABOLISM DURING EMBRYONAL DEVELOPMENT. [1962] [1]p.
Order from SLA $1.10 62-16055

Abstract trans. of Nagasaki Igakkai Zasshi (Japan) 1933, v. 11, p. 307-315.

DESCRIPTORS: *Gases, *Metabolism, Embryos.

Gaevskaya, M. S.
CARBOHYDRATE-PHOSPHORUS METABOLISM IN THE BRAIN WITH EXPIRATION UNDER CONDITIONS OF HYPOTHERMIA FOLLOWED BY REVIVAL OF THE LIFE FUNCTIONS OF THE ORGANISM. [1962] [17]p. 25 refs.
Order from OTS or SLA $1.60 62-14698

Trans. of mono. [Voprosy Biokhimii Nervnoi Sistemy] (Problems in the Biochemistry of the Nervous System) [ed. by] A. V. Palladin, Kiev, 1957, chap. 24, p. 268-277.

DESCRIPTORS: *Carbohydrates, *Phosphorus, *Metabolism, *Brain, *Hypothermia, *Clinical death

The problem of the present research consisted of investigating the energy possibilities in cerebral tissue during different stages of dying and resuscitation of animals under conditions of hypothermia. Hypothermia results in a sharp (approx. 10 times) retardation in the disintegration process of energy resources in the brain tissue at the time of dying not changing however the rate of the restoration process of the carbohydrate-phosphorus metabolism in the brain following restoration of blood supply. (Author)

Kalinichenko, T. Ya.
URINARY LEVELS OF PREGNANEDIOL IN WOMEN WITH DYSTOCIA (Riven' Pregnandiolu v Sechi u Zhinok pri Slabosti Rodovoi Diyal'nosti). 1960, 7p. RSTP Ab-391-60.
Order from OTS $0.50 62-11153

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR) 1957, no. 2, p. 46-48.

DESCRIPTORS: *Women, *Childbirth, *Urine, *Pregnancy, *Steroids, *Pregnanediols.

The highest level of pregnanediol excreted in the urine is observed at the end of the ninth month of pregnancy. It varies within the limits of 8.2 to 15 mg per liter of urine. The level of pregnanediol is markedly reduced prior to delivery. In delayed labor, the excretion of pregnanediol reaches much higher levels. In delayed pregnancy and in primary uterine dystocia it is very important to determine the amount of pregnanediol in the urine of the pregnant woman. This permits early stimulation of labor by means of creating a folliculin background. The gradual and increasing saturation of the organism of the pregnant woman with estrogens is more effective in normalizing birth activity than the single administration of estrogens, however large the dose. While creating a folliculin background it is necessary to follow the reduction in the level of pregnanediol. This permits regulation of the administration of estrogens to the pregnant woman. (Author).

Kassil, G. N., Bein, A. M., and Kamenetskaya, B. I.
THE STATE OF THE HEMATO-ENCEPHALIC BARRIER DURING CERTAIN EXPERIMENTAL REACTIONS UPON THE ORGANISM. [1962] [10]p. 6 refs.
Order from OTS or SLA $1.10 62-14705

Trans. of A[kademiya] N[auk] SSSR. D[oklady] 1957, v. 115, no. 4, p. 833-836.

DESCRIPTORS: *Hemato-encephalic barrier, Radiobiology, *Labeled substances, *Brain, *Trauma, *Convulsions, Drugs, Epinephrine, Hyaluronidase, Hyaluronic acid, Prostigmine.

The penetrability of the hematoencephalic barrier (HEB) was established by injections into white rats of radioactive phosphorus (P^{32}). The relative isotope content of the cortex, the white substance, the hypothalmic area, and the cerebellum of the dried brain was determined at intervals of 1, 3, 24 and 48 hours after injection. The acetycholine content was found for the remaining tissue. The hyaluronidase activity was determined by the mucin precipitate. Similar analyses were done on experimental animals following muscle skull trauma and electrically induced convulsive states. The P^{32} contents of all divisions of the brain following muscle skull trauma and convulsive states, greatly exceeded that of the control animals. When atropine, pentamine and proserine (prostigmine) were given in these conditions the P^{32} content of the brain did not exceed that of the control group. These 3 drugs, also, inhibited the increase in free acetylcholine and the activity of hyalurionidase which had been found to follow in both the traumatized and the convulsive states. Mesatone (neo-synephrine) given to traumatized rats decreased the HEB penetration much less than the other 3 drugs. Mesatone only slightly decreased the free acetylcholine and hyaluronidase activity in the brain tissues.

Myslivecek, J. and Jilek, L.
DEVELOPMENT OF OXYGEN REQUIREMENT IN SOME TISSUES OF RATS. [1962] [10]p. 10 refs.
Order from SLA $1.10 62-14742

Trans. of Cesk[oslovenska] Fysiolog[ie] 1953, v. 2, no. 4, p. 363-366.

DESCRIPTORS: *Oxygen consumption, *Tissues (Biology), Rats, *Metabolism, Anoxia, Brain, Liver, Kidneys, Growth, *Age.

In tissue metabolism of rats changes occur approx. on the 3rd day, are especially pronounced between 6--8 days and continue during further development. The change in oxygen consumption of cerebral tissue and the remaining tissues occurs on the same days. Up to the 6th day the cerebral tissue of anoxic rats definitely uses more oxygen than the cerebral tissue of decapitated rats. Later this difference is still detectable but is statistically insignificant. Up to the 6th day the liver tissue of anoxic rats consumes a greater quantity of oxygen than the liver tissue of decapitated rats. In rats more than 6 days old the phenomena is reversed. During ontogenesis oxygen consumption in anoxic rats decreases and in normal rats it increases. In kidney tissue of normal anoxic rats no significant difference in oxygen consumption is observed for the 3rd week. At the end of 3 weeks the kidneys of anoxic rats require more oxygen than the kidneys of normal rats. In the diaphragm tissue of anoxic and decapitated rats no significant difference in 0_2 consumption was observed. (Author)

Myslivecek, J. and Jilek, L.
DEVELOPMENT OF RESISTANCE DURING ONTOGENESIS IN CONNECTION WITH ALTITUDE ANOXIA. [1962] [9]p. 11 refs.
Order from SLA $1.10 62-14743

Trans. of [Ceskoslovenska Fysiologie] 1953, v. 2, p. 303-306.

DESCRIPTORS: Resistance, *High altitude, *Anoxia, Rats, *Age, *Adaptation (Physiology), Growth.

Resistance to altitude anoxia in white rats during their growth period drops in spurts. The critical stages in the decline of resistance occur approximately at the age ranges of 8-10 days, around the 10th and the 20th day. The mean height at which young animals die are as follows; up to 8 days - 20,000 meters; between the 10th and 14th day - 17,000 meters; between 15th and 19th - 14,900 meters; and between the 20th and 30th - 13,300 meters. Gaining sight, which coincides sometimes with the second critical state is not necessarily the cause of the drop in resistance. (Author)

Negovskii, V. A.
ONE OF THE EFFECTIVE MEANS OF PERCEIVING THE ESSENCE OF LIFE. 8 Nov 62 [10]p.
JPRS: 16092.
Order from OTS or SLA $1.10 62-33677

Trans. of Sudebno-Meditsinskaya Ekspertiza (USSR) 1962, v. 5, no. 3, p. 3-8.

DESCRIPTORS: *Clinical death, Physiology, Pathology, Resuscitation, Metabolism, *Viability.

Saparina, E.
SOVIET POPULAR SCIENCE STUDY OF THE BRAIN. 7 Nov 62 [26]p. JPRS: 16068.
Order from OTS or SLA $2.60 62-33693

Trans. of Znanie-Sila (USSR) 1962 [v. 37] no. 8, p. 20-23.

DESCRIPTORS: *Brain, *Anatomy, Physiology, Nervous system, *Neuromuscular transmission, Bioelectronics.

Simko, J., Neubauer, E., and Sedlak, J.
EFFECT OF HEAVY PHYSICAL WORK ON LIVER AND KIDNEY FUNCTIONS IN PREGNANT WOMEN (Vplyv Tazkej Telesnej Prace na Funkciu Pecene a Obliciek u Tehotnych Zien) tr. by Tatiana Boldyreff. 11 June 59, 11p. (15 refs. omitted).
Order from OTS or SLA $1.60 59-18490

Trans. of Ceskoslovenska Gynaekologie, 1958, v. 23, p. 198-202.

DESCRIPTORS: *Pregnancy, Physiology, *Kidneys, *Liver, Exercise, Labor.

The authors studied on 30 working women and farm women, the effect of strenuous physical exertion on the hepatic and renal functions during the 3 stages of pregnancy. They found that the strenuous physical labor does not affect in any manifest way the function of the liver and the kidneys in normal women. The changes which were observed are the result of physical processes connected with the pregnant state. (Author)

Timakov, V.
MAN AND THE COSMOS. 3 Apr 62 [9]p. FTD-TT-61-256.
Order from OTS or SLA $1.10 62-24912

Unedited rough draft trans. of Sovetskii Krasnyi Kresi (USSR) 1960 [v. 10, no. 1] p. 12-13.

DESCRIPTORS: *Space flight, Space medicine, Spaceships, Launching, *Astronauts, Astronautics, Acceleration, Gravity, Weightlessness, Physiology.

Veksler, Ya. I.
DYNAMICS OF PHOSPHORUS CONTAINING MACROERGIC COMPOUNDS IN THE BRAIN DURING HYPOTHERMIA. [1962] [14]p.
Order from OTS or SLA $1.60 62-14737

Trans. of mono. [Voprosy Biokhimii Nervnoi Sistemy] (Problems in the Biochemistry of the Nervous System) ed. by A. V. Palladin, Kiev, 1957, chap. 25, p. 278-285.

DESCRIPTORS: *Phosphorus compounds, *Brain, *Hypothermia, Anesthesia, Adenosine phosphates, Metabolism, Phosphorylation, Pentothal sodium.

The adenosine triphosphate, creatine phosphates and inorganic phosphates in the brains of rats and rabbits were analyzed following hypothermia without drugs and hypothermia with sodium amytal induced narcosis. Artificial cooling significantly affected the metabolism of phosphorus-containing compounds. During the first (35-30°C) stage a disintegration of macroergic phosphorus compounds occurs followed by an increase of inorganic phosphate. During the second stage of cooling (below 30°), a gradual accumulation of these substances occurs. It may be assumed that a high content of phosphorus compounds in the brain in hypothermia is related to a decreased consumption and to maintenance of sufficiently high intensity in the phosphorylation process. Sodium amytal narcosis, although lessening the unfavorable changes in the metabolism of phosphorus compounds in a number of animals during the first period of cooling, had a negative effect upon the dynamics of the macroergic compounds in the brain during the second stage of hypothermia.

Verzhbinskaya, N. A.
TISSUE MECHANISM OF ADAPTATION OF ANIMALS TO A REDUCED OXYGEN CONTENT IN THE ENVIRONMENT. 8 Nov 62 [20]p. 19 refs. JPRS: 16105.
Order from OTS or SLA $1.60 62-33681

Trans. of Akademiya Nauk SSSR. Izvestiya. [Seriya Biologicheskaya] 1962 [v. 27] no. 3, p. 430-442.

DESCRIPTORS: *Tissues (Biology), *Adaptation (Physiology), Animals, *Anoxia, Air, Brain, Metabolism, Phosphorylation, Genetics, Oxidation, Hematoencephalic barrier, Permeability

The results of a study of the rate of turnover of adenosinetriphosphoric acid (ATP) in the brain in vivo and the permeability of the hematoencephalic barrier in 11 generations of rats born, bred and reproducing in a hypoxic medium containing 10.5-11 percent oxygen are presented. The rats were kept in a gas flow chamber, in which for 12 hours a day a mixture of air and nitrogen was administered; the carbon dioxide and moisture in the chamber were absorbed by soda lime and silica gel. In the first period of acclimatization, which, according to the data of this work, lasted at least for the lifetimes of two generations of rats, the survival of the animals under conditions of oxygen deficiency is assured by the mobilization of different physiological reserves of the body. Maintenance of the normal oxidation level in the brain and in other vital organs is achieved by an increased consumption of oxidative energy by the body as a whole during this period. A period when the tissue reaction to hypoxia appears and the permeability of the hematoencephalic barrier returns to normal was found beginning with the eighth generation of rats living in a hypoxic medium. By this period the capacity of more efficient and economical utilization of the energy of oxidative metabolism is elaborated. An increased rate of oxidative phosphorylation in the brain tissues occurs probably because of a greater conjugation of oxidation with phosphorylation. (Extract)

Biochemistry

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNAL: BIOCHEMISTRY, 1961, NOS. 3-7 AND 12-14. 16 Feb 62 [32]p. JPRS: 12535.
Order from OTS or SLA $3.60 62-19161

Trans. of selected abstracts from Referativnyi Zhurnal. Khimiya. Biologicheskaya Khimiya (USSR) 1961, nos. 3-7 and 12-14.

DESCRIPTORS: *Abstracts, China, *Biochemistry, Microbiology, Enzymes, Plants, Animals, Viruses, Proteins, Vitamins, Hormones.

OBTAINING TOBACCO LOW IN NICOTINE. [1962] 3p.
Order from K-H $3.75 K-H 3964-b

Trans. of German patent 509,016 [1930].

DESCRIPTORS: *Tobacco, Processing, *Nicotine.

PROCESS FOR ARTIFICIAL FERMENTATION AND REMOVAL OF NICOTINE FROM TOBACCO. [1962] 4p.
Order from K-H $5.00 K-H 3869-d

Trans. of German patent 507,194 [1930].

DESCRIPTORS: *Tobacco, Processing, *Fermentation, *Nicotine.

PROCESS FOR DECREASING THE NICOTINE CONTENT OF TOBACCO. [1962] 3p.
Order from K-H $3.75 K-H 3964-h

Trans. of German patent 293,921 [1914].

DESCRIPTORS: *Tobacco, Processing, Purification, *Nicotine.

Asmaev, P. G.
NEW FERMENTATION CONDITIONS FOR CIGARETTE TOBACCO. [1962] 16p.
Order from K-H $20.00 K-H 11480-b

Trans. of Tabak (USSR) 1960 [v. 21] no. 2, p. 34-46.

DESCRIPTORS: *Tobacco, *Cigarettes, *Fermentation.

Eroshin, V. K.
OXIDATION OF STEROIDS BY THE MUCORALES FUNGI. [1962] 9p.
Order from ATS $11.75 ATS-54P64R

Trans. of #Mikrobiologiya (USSR) 1962, v. 31, no. 4, p. 608-615.

DESCRIPTORS: *Oxidation, *Steroids, *Fungi.

Garbers, C. F. and Karrer, P.
CAROTENOID SYNTHESIS. XII. BIS-DEHYDRO-LYCOPENE AND TOTALLY SYNTHETIC CIS-LYCOPENE. [1962] 13p.
Order from K-H $16.25 K-H 5472-d

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1953, v. 36, p. 828-834.

DESCRIPTORS: *Carotenoids, Synthesis, Pigments, *Plant pigments, Molecular structure.

Giovannozzi, M[ario].
DEVELOPMENT OF MICROORGANISMS IN TOBACCO CURED BY THE "PERIQUE" METHOD. Rept. 13 of Studies on the Fermentation of tobaccos. [1962] 26p.
Order from K-H $32.50 K-H-3374-b

Trans. of il Tabacco (Italy) 1952, v. 56, [no. 631] p. 50-52.

DESCRIPTORS: *Microorganisms, *Tobacco, *Fermentation, Processing

Giovannozzi, Mario.
ON A POSSIBLE CAUSE CAPABLE OF PRODUCING A FERMENTATIVE APPEARANCE OF THE TOBACCO. Rept. 14 of Studies on the Fermentation of Tobaccos. [1962] 4p.
Order from K-H $5.00 K-H 3160-d

Trans. of il Tabacco (Italy) 1952, v. 56 [no. 637] p. 227-245.

DESCRIPTORS: *Tobacco, *Fermentation, Microorganisms, Chemical properties.

Il'in, G. S.
SHORT COMMUNICATIONS ON THE QUESTION OF THE BIOSYNTHESIS OF NICOTINE. [1962] 4p.
Order from K-H $5.00 K-H 9793-a

Trans. of #Fiziologiya Rastenii (USSR) 1959, v. 6, [no. 4] p. 474-475.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 61-10924 [1961] 4p.

DESCRIPTORS: *Plants, *Tobacco, Alkaloids, *Nicotine, *Biosynthesis.

For abstract see Technical Translations 5: 591, 1961.

Karrer, P., Helfenstein, A. and others.
PLANT [DYES]. XXIX. THE SYMMETRICAL LYCOPENE FORMULA. [1962] 7p.
Order from K-H $8.75 K-H 5179-a

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1931, v. 14, p. 435-438.

DESCRIPTORS: *Plant pigments, *Dyes, Molecular structure.

Kersaint, G., ed.
DEOXYRIBONUCLEIC ACID; ITS STRUCTURE, SYNTHESIS AND FUNCTION. Proceedings of the Annual Meeting (no. 11) of the Physical Chemistry Society (Société de Chimie Physique). June/July 62, approx. 240p.
Order from PP $10.00

Contains papers in French and English.

DESCRIPTORS: *Nucleic acids, Molecular structure, Biosynthesis, Synthesis, Biochemistry, Ultraviolet radiation, Radiation effects, Conferences, Bacteriophages.

Köber, B.
PROCESS FOR IMPROVING AND UPGRADING TOBACCO. [1962] 4p.
Order from K-H $5.00 K-H 5877-b

Trans. of Swiss patent 300,927, 1954.

DESCRIPTORS: *Tobacco, Processing.

Kober, B.
PROCESS FOR IMPROVING TOBACCO. [1962] 4p.
Order from K-H $5.00 K-H 5877-a

Trans. of Swiss patent 300, 581, pub. 16 Oct 54.

DESCRIPTORS: *Tobacco, *Processing.

Kuvman, G. A., Breger, M. A., and Balyn, I. P.
A RAPID MICROMETHOD FOR DETERMINING THE CONCENTRATION OF ANTIBIOTICS OF THE TETRACYCLINE GROUP (BIOMYCIN, CYCLOMYCIN AND RIOMYCIN) IN THE BODY FLUIDS (Bystryi Mikrometod Opredeleniya Kontsentratsii Antibiotikov Gruppy Tetratsiklinov (Biomitsina, Tsiklomitsina i Riomitsina) v Biologicheskikh Zhidkostyakh). [1962] [5]p. (foreign text included) 1 ref.
Order from OTS or SLA $1.10 62-16050

Trans. of [#Byulleten' Eksperimental'noi Biologii i Meditsiny] (USSR) 1956 [v. 41, no. 1] p. 78-79.

DESCRIPTORS: Microchemistry, *Antibiotics, Determination, *Body fluids, *Tetracyclines.

Lindner, F., Junk, R. and others.
DEHYDROGENATION OF Δ^4 -3 KETO STEROIDS TO 1, 4-DIENE-3-KETO COMPOUNDS BY BACTERIA OF THE SUBTILIS GROUP. [1962] 2p. 6 refs.
Order from SLA $1.10 62-14936

Trans. of die Naturwissenschaften (West Germany) 1956, v. 43 [no. 2] p. 39.

DESCRIPTORS: *Dehydrogenation, Enzymes, *Steroids, *Bacillus subtilis, *Corticosteriods, Adrenal cortical extract, *Molds, Fermentation, Fungi.

Mashkovtsev, M. F., Mikoy[a]n, A. L., and Sirotenko, A. A.
ON THE CONTENT IN THE AIR OF FERMENTATION ROOMS OF SUBSTANCES (VOLATILE) OF ACIDIC AND BASIC CHARACTER. [1962] 10p.
Order from K-H $12.50 K-H 5613-c

Trans. of Tabak (USSR) 1955, v. 16, no. 1, p. 46-49.

DESCRIPTORS: *Fermentation, Air, Acids, *Tobacco.

Nakabayashi, Toshio and Hada, Norimasa.
ISOLATION OF TANNINS, Pt. 1 of Studies on Tannins of Spirogyra Arcta. [1962] 14p.
Order from K-H $17.50 K-H 3629-b

Trans. of [Nihon Nogei-Kagakkai Shi] (Japan) 1954, v. 28, p. 387-391.

DESCRIPTORS: Separation, *Tannic acids, *Algae.

Paris, G.
STUDIES AND RESEARCHES ON THE BIOCHEMISTRY OF TOBACCO, I. [1962] 26p.
Order from K-H $32.50 K-H 3893-a

Trans. of Staz[ioni] Sper[imentali] Agrar[ie] Ital[iane] 1916, v. 49, p. 405-421.

DESCRIPTORS: *Tobacco, *Biochemistry.

Rasmussen, H. B.
CONTRIBUTION TO KNOWLEDGE OF ALAKALOID FORMATION IN PLANTS, I. [1962] 9p.
Order from K-H $11.25 K-H 3964

Trans. of Biochemische Zeitschrift (Germany) 1915, v. 69, p. 461-466.

DESCRIPTORS: *Plants, *Alkaloids, Biochemistry.

Schramm, G., Grötsch, H., and Pollmann, W.
NON-ENZYMATIC SYNTHESIS OF POLYSACCHARIDES, NUCLEOSIDES AND NUCLEIC ACIDS. 11 Jan 62, 3p. 2 refs.
Order from SLA $1.10 62-14241

Trans. of Angewandte Chemie (West Germany) 1961, v. 73, no. 17/18, p. 619.

DESCRIPTORS: Synthesis, *Polysaccharides, Nucleosides, Nucleic acids, Enzymes.

Sengbusch, R. V.
THE CULTURE OF NICOTINE-FREE AND NICOTINE-POOR TOBACCO. [1962] 15p.
Order from K-H $18.75 K-H 5389-b

Trans. of der Züchter (Germany) 1931, v. 3, no. 2, p. 33-38.

DESCRIPTORS: *Tobacco, *Nicotine, Agriculture.

Staub, M. and Furrer, H.
THE REPRODUCIBILITY OF SMOKE INVESTIGATIONS. V. TOBACCO INVESTIGATIONS. [1962] 32p.
Order from K-H $40.00 K-H 6673-b

Trans. of Mitteilungen aus dem Gebiete der Lebensmitteluntersuchungen und Hygiene (Switzerland) 1957, v. 48, p. 94-116.

DESCRIPTORS: *Smokes, Tobacco, Scientific research.

Stolkowski, J.
STUDIES ON THE CELL EXCHANGES IN POTASSIUM AND THEIR BIOLOGICAL INCIDENCES, IN PARTICULAR UNDER THE INFLUENCE OF CORTICOSTEROID HORMONES (Recherches sur les Échanges Cellulaires en Potassium, et leurs Incidences Biologiques, en Particular sous l'Influence d'Hormones Corticosteroides). [1962] 3p. 1 ref.
Order from SLA $1.10 62-16908

Partial trans. (conclusions) of [paper presented at] Potassium Symposium [International Potash Institute, Berne] 1960 [pub. 1961].

DESCRIPTORS: Cells (Biology), *Potassium, *Metabolism, *Corticosteroids, Hormones, Polymerization, Nucleic acids.

Timofeeva, A. G., Gusakova, E. G., and Shpingis, A. A.
COMPARATIVE STUDY OF STEROID CONVERSIONS BY SOME SPECIES OF MOLDS OF THE IMPERFECT GROUP. [1962] 9p.
Order from ATS $12.25 ATS-55P64R

Trans. of Akad[emiya] Nauk SSSR. Izv[estiya]. Ser[iya] Biol[ogicheskaya] 1961, v. 26, no. 4, p. 574-581.

DESCRIPTORS: *Steroids, Chemical reactions, *Molds.

Tombesi and Giovannozzi, M.
NEW RESEARCH CRITERIA FOR THE FERTILIZATION OF VIRGINIA BRIGHT. Note 2 on Physiological and Biochemical Research on Nicotine Tebacum Var. Virginia Bright. [1962] 28p.
Order from K-H $35.00 K-H 5629-d

Trans. of il Tabacco (Italy) 1954 [v. 58] no. 654, p. 3-33.

DESCRIPTORS: *Tobacco, Plants, *Fertilizers, Nicotine, Processing.

Verdura, R.
THE CHEMICAL CHANGES OF VIRGINIA BRIGHT DURING THE CURING AND CURING IN "GARBUIO" (GARBOIL). [1962] 17p.
Order from K-H $21.25 K-H 3270-c

Trans. of il Tabacco (Italy) 1954, v. 58, July, p. 227-239.

DESCRIPTORS: *Tobacco, Processing, Chemical reactions.

Weisz, E., Wix, G., and Bodanszky, M.
THE PRODUCTION OF 11-EPICORTICOSTERONE BY A MICROBIOLOGICAL METHOD. [1962] 2p. 8 refs.
Order from SLA $1.10 62-14937

Trans. of die Naturwissenschaften (West Germany) 1956, v. 43 [no. 2] p. 39-40.

DESCRIPTORS: *Corticosteroids, Production, Biochemistry, *Fermentation, *Molds, Enzymes, *Progesterone

Yakovlev, V. A. and Volkova, R. I.
INVESTIGATION OF THE ACTIVE CENTERS OF CHOLINESTERASE WITH THE AID OF ORGANOPHOSPHORUS INHIBITORS. 6 Nov 62 [10]p. 8 refs. JPRS: 16045.
Order from OTS or SLA $1.10 62-33721

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 146, no. 1, p. 217-220.

DESCRIPTORS: *Enzymes, *Cholinesterase, Inhibition, Reaction kinetics, Organic compounds, Phosphorus compounds, *Phosphonic acids, Acetylcholines.

Botany

Dimpflmeier, Rudolf.
GRAFTING ON FOREST TREES BY PROFESSOR DR. HEINRICH MAYR 55 TO 60 YEARS AGO (Pfropfungen an Waldbaumen durch Professor Dr. Heinrich Mayr vor 55 bis 60 Jahren). [1962] [12]p. (figs. omitted) 9 refs.
Order from SLA $1.60 62-16623

Trans. of [Silvae Genetica] (West Germany) 1954, v. 3 [no. 6] p. 122-125.

DESCRIPTORS: *Trees, *Transplantation, Growth, Genetics, Forestry.

Sittler, C.
PHYSICOCHEMICAL METHODS AND TECHNIQUES OF PREPARATION OF SEDIMENTS FOR POLLEN ANALYSIS. [1962] 30p. 21 refs.
Order from SLA $2.60 62-16657

Trans. of reprint from Rev[ue de l']Inst[itut] Franç[ais du] Pétrole [et Annales des Combustibles Liquides] 1955, v. 10, no. 2, p. 103-114.

DESCRIPTORS: *Pollen, Biological laboratories, Preparation, Sedimentation, Chemical analysis, Separation.

Toman, M.
THE THEORY OF THE MOTION OF OSCILLATORIAE. [1962] 18p.
Order from ATS $32.75 ATS-83P62C

Trans. of [Biologicke Prace] (Czechoslovakia) 1955, vo. 1, no. 5, p. 5-24.

DESCRIPTORS: Plants, *Algae, Motion, Theory.

Medical Specialties and Equipment

Anan'ev, M. G., Golubeva, I. V. and others.
PRELIMINARY DATA ON EXPERIMENTAL ELECTRONARCOSIS INDUCED WITH APPARATUS OF THE SCIENTIFIC RESEARCH INSTITUTE OF EXPERIMENTAL SURGICAL APPARATUS AND INSTRUMENTS (Predvaritel'nye Dannye po Eksperimental'nomu Primeneniyu Elektronarkoza Apparatom Nauchno-Issledovatel'skogo Instituta Eksperimental'noi Khirurgicheskoi Apparatury i Instrumentov). 1960, 13p. 13 refs.
RSTP Ab-2267 60
Order from OTS $0.50 62-11155

Trans. of Eksperimental'na Khirurgiya [i Anesthesiologiya] (USSR) 1957 [v. 2] no. 4, p. 3-7.

DESCRIPTORS: *Bioelectronics, *Anesthesia, Medical equipment, *Surgery, *Physiology, Narcotics, Blood.

A pulsatile current with a frequency of 100 periods a second, a duration of one to 1.4 milliseconds in combination with a direct component, with an ocular-occipital arrangement of the electrodes (cathode on the eyes; anode on the occiput), an average current of 7-10 ma and a voltage of 35-40 volts produces complete tissue anesthesia of animals, permitting the performance of complex surgical procedures. Electronarcosis in dogs is obtained with a slow increase in the current. Over the course of 10-15 minutes the current is brought to about 1 ma, and thereby sleep is obtained in the animal. The current is then increased during the next 20 minutes to 4-5 ma (for the purpose of obtaining the narcotic phase). With the start of the operation the current is slowly increased to 7-13 ma (pulsating voltage of about 40 volts). The data confirm the possibility of obtaining a deep anesthesia of tissues through the use of the electronarcosis apparatus and the possibility of avoiding such side-effects as apnea, convulsions or mass movements. After the current is turned off, tissue anesthesia is maintained for 10-30 minutes. Electronarcosis does not produce deep irreversible changes in the vital functions of the organism. (Author)

Kochergin, I. G.
URGENT PROBLEMS OF HIGHER MEDICAL EDUCATION IN THE USSR. 3 Dec 62 [11]p. JPRS: 16473.
Order from OTS or SLA $1.60 63-13280

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 10, p. 3-10.

DESCRIPTORS: *Medical personnel, *Education, *Universities, Students, *Medicine.

Schulze, W. and Baumann, H.
MIRACLE BANDS WITH THE INSERTS OF ORACID POWDER AND DRY-FOAM PLATES (METHYLOL-UREA PREPARATIONS). [1962] [17]p. (figs. omitted) 8 refs.
Order from SLA $1.60 62-16747

Trans. of Zentralblatt für Chirurgie (East Germany) 1960, v. 85, no. 5 [p. 209-219].

DESCRIPTORS: *Medical supplies, *Surgery, *Wounds, Healing, Protective coverings, *Expanded plastics, Urea formaldehyde resins, Powders.

Based on methylol-urea a dry-foam has been developed which ground as oracid powder or as dry-foam plates not only in animal tests but after six years of clinical testing has proven it's good applicability as a textile-free wound covering for humans. (Author)

Microbiology

Bignot, G. and Neumann, M.
THE STRUCTURE OF FORAMINIFERAL TESTS: BIBLIOGRAPHIC REVIEW. [1962] 16p.
Order from ATS $20.75 ATS-11P63F

Trans. of Rev[ue de] Micropaleontol[ogie] (France) 1962, v. 4, no. 4, p. 237-248.

DESCRIPTORS: *Foraminifera, Tests, Bibliography.

Ganczarski, Alfred and Mikucki, Jerzy
ON STAPHYLOCOCCAL DIPHOSPHOPYRIDINE NUCLEOTIDASE. 8 Dec 61 [16]p. JPRS: 11426
Order from OTS or SLA $1.60 62-19544

Trans. of Postepy Higieny i Medycyny Doswiadczalnej (Poland) 1961, v. 15, no. 3, p. 285-296.

DESCRIPTORS: Infections, *Staphylococcus, Heart, Diseases, *Streptolysins, *Bacterial Toxins, *Nucleotides, Enzymes, Pyridine derivatives, *Phosphorylases, Coenzymes.

Malek, Ivan.
SPORULATION OF BACILLI (Sporulace Bacilu) tr. by Vedral. 13 Jan 61, 20p. (illus. omitted) 15 refs. H-7437
Order from OTS or SLA $1.60 62-25257

Trans. of Ceskoslovenska Biologie, 1953, v. 2, no. 6, p. 323-334.

DESCRIPTORS: *Spores, *Bacteria, Culture media, Age, Nutrition, Growth, Metabolism, Enzymes.

Pacheco, Genésio and Echaniz, José S.
BACTERICIDAL AND BACTERIOLYTIC ACTION OF THE PHOSPHATES. [1962] 6p.
Order from SLA $1.10 62-16182

Trans. of Brasil-Médico, 1953, v. 67, no. 2, p. 43-46.

DESCRIPTORS: *Bactericides, *Phosphates, Water, Potassium compounds, Growth, *Bacteria, Culture media.

Misch, A.
ELECTIVE MUTISM IN CHILDREN. [1962] [77]p. (refs. omitted).
Order from SLA $7.60 62-16469

Trans. of Zeitschrift für Kinderpsychiatrie (Switzerland) 1952, v. 19, no. 2, p. 49-87.

DESCRIPTORS: *Speech disorders, *Children, *Psychoneuroses, Diagnosis, Anxiety, Behavior, Personality, *Verbal behavior, Therapy.

Sheveleva, V. S.
DEVELOPMENT OF "SPONTANEOUS" BIOELECTRIC ACTIVITY IN DIFFERENT PARTS OF THE NERVOUS SYSTEM DURING ONTOGENY (Razvitie "Spontannoi" Bioelektricheskoi Aktivnosti Razlichnykh Otdelov Nervnoi Sistemy v Ontogeneze). [1962] [8]p. 19 refs.
Order from OTS or SLA $1.10 62-18056

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 142, no. 1, p. 249-252.

DESCRIPTORS: *Brain, *Nervous system, Electric potentials, *Age factors, *Electroencephalography.

Measurements were made of the bioelectric activity of the rabbit cerebral cortex and of the "spontaneous" biopotentials of the thalamus, hypothalamus, cerebellum and sympathetic ganglia at various stages of ontogeny. Simultaneous recordings were obtained by means of a multichannel oscillograph. The dominance of sympathetic activity during early postnatal life is, with age, replaced by the higher and more complex activity in the cerebral cortex. During the first postnatal days, flushes of "spontaneous" bioelectric activity in the central nervous system always follow increases in sympathetic activity. The evidence suggests that the two systems are functionally interrelated and that the early high levels of sympathetic activity may be of importance in the formation of higher nervous activity.

Pathology

ALL-UNION CONFERENCE OF SURGEONS, TRAUMATOLOGISTS, AND ANESTHESIOLOGISTS (NO. 2) BAKU, 20-25 Dec 61. 31 Oct 62 [52]p. JPRS: 15968.
Order from OTS or SLA $5.60 62-33698

Trans. of Vestnik Khirurgii (USSR) 1962, v. 89, no. 8, p. 112-126.

DESCRIPTORS: Conferences, *Plastic surgery, Blood vessels, Bone, *Surgery, Intestines, Tumors, *Anesthesia.

ARCHIVES OF PATHOLOGY, 1962, VOL. 24, NO. 7: SELECTED ARTICLES. 1 Nov 62 [40]p. 111 refs. JPRS: 15985.
Order from OTS or SLA $3.60 62-33726

Trans. of Arkhiv Patologii (USSR) 1962, v. 24, no. 7, p. 3-18 and 42-54.

DESCRIPTORS: *Clinical death, Resuscitation, Etiology, Pathology, *Arteriosclerosis, *Nervous system, Blood vessels, *Cancer.

Contents:
The main results of pathophysiological study of processes of dying and reanimation of the organism, by V. A. Negovskii
The pathogenesis of arteriosclerosis in the light of morphologic data, by I. V. Davdovskii and others
Central nervous system pathology in experimental arteriosclerosis in dogs, by L. A. Dolina
Arteriosclerotic involvement of blood vessels in cancer, by P. N. Sementsov.

COLLECTION OF SCIENTIFIC WORKS OF THE ELISTA PLAGUE-CONTROL STATION, 1959, VOL. 1. 10 Oct 62 [253]p. JPRS: 15647.
Order from OTS or SLA $16.50 62-33449

Trans. of Elistinskaya Protivochumnaya Stantsiya. Sbornik Nauchnykh Rabot (USSR) 1959, v. 1, 252p.
##Other translations of p. 19-20 and 193-203 are available from OTS or SLA $1.60 ea. as 61-28155 and 62-23304.

DESCRIPTORS: Public health, *Plague, Epidemiology, *Rodents, Disease carriers, Sensitivity, Geography, Laboratory animals, Caspian Sea, *Fleas, Parasites, Transmission, Control, Ecology, *Diagnosis, Pasteurella, *Agglutinins, Serum, Preservation, *Anthrax vaccine, *Immunology, Brucella, Mice, *Tularemia, Q fevers.

Contents:
350 Years of indestructible friendship, by B. O. Dzhimbinov
Public health of Kalmykiya during the years of the Soviet regime, by Ts. K. Korsunkiev.
##The current status of the plague focus in the Northwest Caspian and problems of its further study, by N. P. Mironov and others
Plague epizootics on the territory of the Kalmyk steppes, by A. K. Shishkin
Experimental plague in different populations of meridional jirds, by M. I. Levi and others
Experimental plague in different dwarf souslik populations, by M. I. Levi and others
Sensitivity of young sousliks taken from different geographic places to the plague microbe and toxin, by B. G. Val'kov and others
Lingering forms of plague in laboratory animals, by L. B. Adimov
The problem of the role of ticks in the epizootology and natural focalization of plague in the Northwest Caspian focus, by K. S. Karpuzidi and others
Some additions to the characterization of the main plague microbe reservoirs, by M. I. Levi
Jird fleas (Aphaniptera) of the Northwest Caspian, by P. I. Shiranovich and others
Notes on the ecology of jerboa fleas in the Northwest Caspian region, by P. P. Shiranovich and others
Census dynamics of sousliks on treated areas in the natural plague focus of the Northwest Caspian region, by A. A. Lisitsyn and others
Findings of remains of the great sand rat in the Northwest Caspian region, by P. Z. Oleinik and others
Medium for the differential diagnosis of pasteurella pseudotuberculosis and the geographic varieties of Pasteurella Pastis, by S. I. Zaplatina and A. S. Filimonova
Simplified method of absorption of group agglutinins by antiplague serum, by G. G. Gurleva
The method of studying fleas in the epizootological investigation of sandy regions, by P. I. Shiranovich and P. F. Treshchilin
The possibilities of prolonged preservation of the plague microbe on media made of an enzyme hydrolysate of cassin, by Z. A. Yurgina and others

##Compatibility of living plague, tularemia, brucellosis and anthrax vaccines in experiments on guinea pigs, by S. L. Borod'ko and L. G. Samsonovich

Immunological changes in persons inoculated percutaneously against plague, brucellosis and tularemia, by S. L. Borod'ko and others

The harmlessness of the vaccine strain of Brucella Abortus 104-"M" and serological reorganization occurring from subcutaneous and percutaneous application of it, by V. P. Strachkova and S. L. Borod'ko

Experimental brucellosis in social and meadow voles, by S. L. Borod'ko

Observations on the maintenance of tularemia infection in a natural microfocus, by B. G. Val'kov and others

Q fever in some regions of the Kalmyk Autonomous Republic, by V. S. Larin and S. L. Borod'ko

HYGIENE AND SANITATION, 1962 [VOL. 27] NO. 7: SELECTED ARTICLES. 29 Oct 62 [49]p. 60 refs. JPRS: 15920.
Order from OTS or SLA $4.60 62-33671

Trans. of Gigiena i Sanitariya (USSR) 1962 [v. 27] no. 7, p. 8-11, 22-27, 33-42, 60-63, 79-87, 103-105.

DESCRIPTORS: Public health, Sanitary engineering, Radioactive isotopes, *Strontium, *Radiobiology, Fluorine, *Hemopoiesis, Measurement, *Thermoelectricity, Aerosoles, *Atmosphere pollution, Space medicine, *Radioactivity, *Adaptation (Physiology), *Soils,

Contents:

The effect of the simultaneous chronic administration of radioactive strontium and the trace element fluorine on hemopoiesis in rats, by V. A. Knizhnikov and others

The application of thermoelectrometry to research in hygiene, by Yu. L. Petrov and L. D. Tikhomirova

Determination and continuous recording of the aerosol content of short-lived radioactive isotopes in air by the "filter saturation" method, by S. P. Golentskii

Problems of space hygiene, by D. I. Lazarenko

Some new methodological approaches to hygienic evaluation of the action of environmental factors on the body (by way of a discussion) by I. S. Kandror

The problem of radioactivity of the soil, by V.N. Gus'kova and A. N. Bragina.

HYGIENE AND SANITATION, 1962, VOL. 27, NO. 8: [SELECTED] TRANSLATIONS. 23 Nov 62 [21]p. 18 refs. JPRS: 16302.
Order from OTS or SLA $1.60 63-13257

Trans. of Gigiena i Sanitariya (USSR) 1962, v. 27, no. 8, p. 60-63 and 79-85.

DESCRIPTORS: Public health, Sanitary engineering, *Radiation hazards, Vinyl chlorides, Inhibition, Labeled substances, *Blood cells, *Fluorescence, Industrial plants, *Dosage, *Poisonous gases, *Protective coverings.

Contents:

A plastic booth for work with radioactive substances, by L. A. Mironov

The fluorescent method in the study of peripheral blood when it is chronically affected by small doses of ionizing radiation, by I. A. Gribova and E. A. Solov'eva

Current maximal permissible concentrations of poisonous gases vapors and dust in the air of industrial plants in the US and USSR, by R. S. Vorob'eva.

Anan'ev, V. A., Narskii, S. V. and others.
SPECIFIC DIAGNOSIS OF INFECTIOUS HEPATITIS IN DOGS (Spetsificheskaya Diagnostika Infektsionnogo Gepatita Sobak). [1962] [11]p. (5 figs. 1 table omitted).
Order from OTS or SLA $1.60 62-16194

Trans. in manuscript of Veterinariya (USSR) 1962, v. 39, no. 2, p. 37-41.

DESCRIPTORS: *Diagnosis, *Hepatitis, *Dogs, Hepatitis virus, Hepatitis serum.

Borodin, V. P.
STUDY OF EFFECTIVENESS OF ANTITULAREMIA VACCINATION IN ZONE OF CONSTRUCTION OF STALINGRAD HYDROELECTRIC STATION (Izuchenie Effektivnosti Protivotulyaremiinoi Vaktsinatsii v Zone Stroitel'stva Stalingradskogo Gidrouzla). 1960 [11]p. 10 refs. RSTP T-17-60.
Order from OTS $0.50 62-11142

Trans. of mono. Voprosy Epidemiologii i Profilaktiki Tulyaremii (Problems of Epidemiology and Prophylaxis of Tularemya) Moscow, 1958, p. 152-155.

DESCRIPTORS: Tularemia, *Tularemia vaccine, Effectiveness, Therapy.

Study of the epidemiologic efficacy of the tularemia Gayskiy-El'bert vaccine, during a period of an already developed outbreak of arthropod-borne tularemia, showed that the morbidity rate among those vaccinated may be reduced 20 times as compared with an unvaccinated group. Among vaccinated persons cases occurred up to 10 days after the inoculation; however, three persons fell ill a month after the inoculation. The cases were usually mold. For the purpose of complete epidemiologic protection vaccination against tularemia must be carried out in 100 percent of the susceptible population. Subsequent, planned, and more extensive coverage of the population reduced the tularemia morbidity to solitary cases; and no cases of tularemia have been seen in the regions of the Volga-Akhtubinsk River Valley in 1951-1957 period. (Author)

Bratushchik, G. Ya.
FEATURES OF VASOREFLEX REACTIONS IN CASES OF LATE PREGNANCY TOXEMIAS (Osoblivosti Sudinoreflektornikh Reaktsii pri Piznikh Toksikozakh Vagitnosti). 1960, 8p. RSTP Ab-3315-60.
Order from OTS $0.50 62-11154

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR) 1957, no. 4, p. 43-45.

DESCRIPTORS: *Women, *Pregnancy, Blood pressure, Hypertension, Toxicity, Pathology.

By means of the type of vascular reaction it is possible to determine, in the early stages, the development and severity of late toxicoses of pregnancy. The severity of the clinical manifestations of late toxicoses of pregnancy, depends on the degree of hypertension, and especially on the intracranial pressure.

Brown, Ethan Allen, ed.
INTERNATIONAL CONGRESS OF ALLERGOLOGY (NO. 4) NEW YORK, OCT 61. PROCEEDINGS.
June/July 62, approx. 800p.
Order from PP $20.00

DESCRIPTORS: *Conferences, *Allergy, Immunology, Antigens, Antibodies, Metabolism, Mineral oils, Colloids, Proteins, Plasma proteins, Steroids, Asthma, Psychosomatic medicine, Therapy.

Buu Hoi, N. P.
CARCINOGENIC SUBSTANCES. [1962] 137p.
Order from K-H $171.25 K-H 11480-a

Trans. from Med[izinische] Grundlagenforschung (West Germany) 1959, v. 2.

DESCRIPTORS: *Cancer, Production, *Chemicals.

Bykhovskii, Z. E.
RHEUMATIC AND NONRHEUMATIC JOINT DISEASES AND THEIR TREATMENT AT SANATORIA AND HEALTH RESORTS: SELECTED PORTIONS.
2 Nov 62 [53]p. JPRS: 16007.
Order from OTS or SLA $5.60 62-33702

Trans. of mono. Revmaticheskie i Nerevmaticheskie Zabolevaniya Sustavov i Ikh Sanatorno-Kurortnoe Lechenie, Moscow, 1962, p. 43-63 and 285-306.

DESCRIPTORS: *Rheumatic diseases, *Therapy, *Joints (Physiology), Pathology, Muscles, *Tendons, Public health, *Health resorts, *Arthritis.

Contents:
Current status of the problem of diseases of joints in patients with rheumatism
Diseases of muscles, chronic inflammation of tendenous sheaths, bursitis, contractures and their treatment
The significance of the therapeutic action of health resort factors
The indices of results of the treatment of patients with diseases of the locomotion by means of health resorts factors
Table of contents
Indications and contraindications for treating patients with diseases of motor organs at health resorts
Major methods for treating patients with infectious polyarthritis of undetermined etiology.

Dombrovskaya, Yu. F. and Isaeva, L. A.
COLLAGEN DISEASES IN CHILDREN. 6 Aug 62 [36]p. JPRS: 14746.
Order from OTS or SLA $3.60 63-13106

Trans. of Pediatriya (USSR) 1962 [v. 41] no. 5, p. 9-20.

DESCRIPTORS: *Collagen, *Diseases, *Children, Vaccines, Allergies, Etiology, Rheumatic fever, Pathology.

The task of the present article is to acquaint a broad circle of children's physicians with the basic forms of the collagen diseases, or collagenoses. (Author)

Evseenko, L. S.
CHANGES IN THE URINARY SYSTEM IN CARCINOMA OF THE UTERINE CERVIX (Izmeneniya v Mochevoi Sisteme pri Rake Sheiki Matki). 1960, 7p.
RSTP Ab-1595-60.
Order from OTS $0.50 62-11151

Trans. of Vrachebnoe Delo (USSR) 1957, no. 6, p. 619-622.

DESCRIPTORS: *Urinary tract, *Uterus, *Neoplasms, Cancer research.

Fen'or, S. M.
EXPERIENCES FROM THE WORK OF THE CLINIC FOR TREATMENT OF FEMALE STERILITY (Opyt Raboty Kabineta po Lecheniyu Zhenskogo Besplodiya). 1960, 8p. RSTP Ab-3342-B60.
Order from OTS $0.50 62-11144

Trans. of Zdravookhranenie Turkmenistana (USSR) 1957, v. 1, no. 3, p. 41-44.

DESCRIPTORS: *Women, *Reproductive systems, Inhibition, Therapy, *Diseases, Metabolism, Endocrine glands, Hormones.

An eight-months' period of the work of the clinic for treatment of female sterility at the First Ashkhabad City Hospital is reported.

Fukuda, Y.
STUDIES OF EXPERIMENTAL MYOCARDITIS CAUSED BY NICOTINE. I. EXPERIMENTAL CARDITIS CAUSED BY BOVINE SERUM PLUS NICOTINE. [1962] 17p.
Order from K-H $21.25 K-H 3367d

Trans. of Nippon J[ournal] of Angio-Cardiology, 1950, v. 14, p. 42-47.

DESCRIPTORS: *Diseases, *Heart, *Nicotine, Cattle, Serum, Cardiac muscle.

Fukuda, Y., Ogawa, J., and Tsuji, J.
STUDIES OF THE "CARDIO-TROPIC" ACTION OF NICOTINE AND CARDIAC PHOSPHATIDE. [1962] 12p.
Order from K-H $15.00 K-H 3879a

Trans. of Nippon Journal of Angio-Cardiology, 1953, v. 17, p. 357-361.

DESCRIPTORS: *Toxicity, *Nicotine, *Heart, Pathology, *Phospholipids.

Golikov, A. P. and Mikushkin, M. K.
CONFERENCE ON THE PROBLEM OF ATHEROSCLEROSIS. 26 Nov 62 [16]p. JPRS: 16327.
Order from OTS or SLA $1.60 63-13297

Trans. of Kardiologiya (USSR) 1962, v. 2, no. 5, p. 90-94.

DESCRIPTORS: Conferences, *Arteriosclerosis.

Gorbasheva, T. P.
MICRO-MACROSCOPIC DATA ON THE PELVIC FASCIA AND ITS RELATION TO THE FEMALE PELVIC ORGANS (Makro-Mikroskopicheskie Dannye o Tazovoi Fastsii i Otnoshenii Ee k Organam Zhenskogo Taza). 1960, 9p. RSTP Ab-260-A60.
Order from OTS $0.50 62-11148

Trans. of Vsesoyuznoe Obshchestvo Anatomov, Gistologov i Embriologov. Sverdlovskoe Otdelenie. Sbornik Nauchnykh Rabot (USSR) 1957 [v. 1] no. 1, p. 47-50.

DESCRIPTORS: *Women, *Reproductive system, Ovary, Uterus, Diseases, Microanalysis, Microstructure.

All the organs of the minor pelvis, being organs which move in bulk and which contain the possibilities of movement, having smooth-muscle fibers, are surrounded by their own fascial sheath, the shape of the inner surface of which is quite an accurate negative of the corresponding organ. The entire visceral fascia is an integral structure, which by lying adjacent to the internal organs (Fallopian tube, uterus and ovary) forms a connective-tissue receptacle for them and is of importance in the spread of suppurative-inflammatory processes. (Author)

Gordienko, A. N.
MECHANISMS OF ALLERGIC REACTIONS: SELECTED PARTS. 30 Oct 62 [59]p. JPRS: 15954.
Order from OTS or SLA $5.60 62-33661

Trans. of mono. Mekhanizmy Allergicheskikh Reaktsii, Kiev, 1961, p. 28-61, 169-188, 246-250, 265.

DESCRIPTORS: *Allergy, *Adaptation (Physiology), Antibodies, Production, *Autonomic nervous system, Anaphylactic shock, *Histamines.

Contents:
The site and mechanism of antibody production
The role of mediators in the development of allergic processes

Conclusion
Table of contents.

Graffi, A. and Gimmy, J.
THE ACTION OF MYELOID MOUSE LEUKEMIA IN RATS (Über die Wirkung der Myeloischen Leukämie der Maus bei der Ratte) tr. by P. Hajdu. 11 June 59, 11p. (1 fig. omitted). 6 refs.
Order from OTS or SLA $1.60 59-16862

Trans. of Zeitschrift für die Gesamte Innere Medizin und ihre Grenzgebiete (East Germany) 1958, v. 13, no. 22, p. 881-884.

DESCRIPTORS: *Leukemia, Rats, Lymph nodes, Transmission, *Virus diseases, Etiology, Mice.

Cell-free filtrates from leukemic lymph nodules from mice produce intrathoracic leukoses in rats treated in the newborn state with filtrate. This finding is an indication against any strict species specificity of leulemogenic viruses. (Author)

Grashchenkov, N. I. and Kassil', G. N.
USE OF NASAL REFLEX THERAPY IN MEDICAL PRACTICE, tr. by Paul V. DePorte. 7 June 56, 15p. 4 refs.
Order from OTS $0.50 62-11146

Trans. of Klinicheskaya Meditsina (USSR) 1955, v. 33, no. 9, p. 12-17.

DESCRIPTORS: *Nose (Anatomy), *Reflexes, *Therapy, *Mucous membranes, Ion exchange, Absorption, Medicine.

Successful clinical experience in outpatient treatment of peptic ulcer by nasal iontophoresis is described in detail. Nasal iontophoresis has been used successfully for treatment of various types of headache and of trigeminal neuralgia. Possible applications of the technique in a variety of pathological conditions are considered.

Gruneberg, Th. and Theune, J.
PROBLEM OF TREATMENT OF ACRODERMATITIS CONTINUA HALLOPEAU IN PARTICULAR WITH TOBACCO BATHS AND CHLORONITRIN. [1962] 12p.
Order from K-H $15.00 K-H 3225-c

Trans. of Z[eitschrift für] Haut- u[nd] Geschl[echts]-krankh[eiten] (West Germany) 1954, v. 16, no. 12, p. 377-381.

DESCRIPTORS: *Skin, *Diseases, Therapy, Water, *Tobacco, *Chloromycetin.

Kato, Hiroshi, Chiba, Teruo and others.
PRELIMINARY STUDIES ON THE SCREENING PROCEDURES OF ANTI-TUMOR FILTRATES FROM STREPTOMYCES CULTURES, tr. by William Himel. 23 Aug 60, 21p. (1 fig. omitted) 7 refs. No. 8-17-60.
Order from OTS or SLA $2.60 60-23687

Trans. of Journal of Antibiotics. Series B. (Japan) 1959, v. 12, no. 6, p. 391-397.

DESCRIPTORS: Antibiotics, *Streptomyces, Culture media, *Cancer, Cells (Biology), Growth, Inhibition, Cancer research, Chemotherapeutic agents.

Koch, D., Odenthal, H., and Bertheau, K.
COMPARATIVE SERUM PROTEIN STUDIES WITH THE ULTRACENTRIFUGE AND PAPER ELECTROPHORESIS IN MALIGNANT TUMORS (Vergleichende Serum-Eiweiss-Untersuchungen mit der Ultrazentrifuge under der Papierelektrophorese bei Malignen Tumoren) tr. by W. H. Everhardy. 3 Dec 58, 20p. (4 figs. omitted) 16 refs.
Order from OTS or SLA $1.60 59-12325

Trans. of [Deutsches Archiv fur Klinische Medizin] (Germany) 1957, v. 204, p. 253-264.

DESCRIPTORS: *Blood proteins, Ultracentrifuges, *Cancer, Tumors, Plasma proteins, Electrophoresis.

Korkushko, O. V., Akopyan, M. A. and others.
ANTIBIOTIC AEROSOLS IN THE TREATMENT OF PATIENTS WITH LUNG ABSCESSES [AND] NEW METHOD OF AUTOMATIC RECORDING OF THE UNIFORMITY OF ALVEOLAR VENTILATION (SPIRORADIOGRAPHY). 29 Nov 62 [17]p. 12 refs. JPRS: 16406.
Order from OTS or SLA $1.60 63-13325

Trans. of Terapevticheskii Arkhiv (USSR) 1962, v. 34, no. 9, p. 84-89 and 102-106.

DESCRIPTORS: *Antibiotics, *Aerosols, Therapy, *Infections, *Lungs, *Recording devices, Respirometers, Gases, Analysis, Automatic, Inhalation immunization.

Kuznetsov, V. A. and Sigalov, A. B.
STILLBIRTH AND WAYS TO REDUCE IT (Mertvorozh daemost' i Puti ee Snizheniya). [1961] 10p. 3 refs. RSTP Ab-454.
Order from OTS $0.50 62-11145

Trans. of Sovetskaya Meditsina (USSR) 1957, v. 21, no. 2, p. 35-41.

DESCRIPTORS: Women, Gynecology, *Pregnancy, *Pathology, Vital statistics, *Childbirth.

Kyuz, E. P., Oppel', V. V., and Del'va, V. A.
CHANGES IN THE CONTENT OF COLLAGENOUS PROTEINS OF THE SKIN FOLLOWING AN EXPERIMENTAL BURN [AND] CONFERENCE ON THE PROBLEM "THE BIOLOGICAL ROLE OF TRACE ELEMENTS." 30 Nov 62 [17]p. 9 refs. JPRS: 16441.
Order from OTS or SLA $1.60 63-13314

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1962, v. 8, no. 4, p. 379-384 and 437-439.

DESCRIPTORS: *Collagen, *Proteins, *Skin, *Burns, Prolines, Conferences, Biology, *Labeled substances.

Leikina, E. S.
NATURAL FOCI OF INFECTION OF SOME HELMINTHIASES (K Voprosu o Prirodnoi Ochagovosti Nekotorykh Gel'mintozov). 1960, 30p. 47 refs. RSTP no. 146-60.
Order from OTS $0.75 62-11162

Trans. of Meditsinskaya Parazitologiya i Parazitarnye Bolezni (USSR) 1957, v. 26, Mar/Apr, p. 140-152.

DESCRIPTORS: *Intestine, Parasites, Worms.

Lozovskii, D. V.
STUDY OF AMINO ACID COMPOSITION IN THE URINE OF SCHIZOPHRENICS EMPLOYING THE METHOD OF CHROMATOGRAPHY ON PAPER. [1962] [11]p. 21 refs.
Order from OTS or SLA $1.60 62-14701

Trans. of mono. [Voprosy Eksperimental'noi Patologii] (Problems of Experimental Pathology) [ed. by] S. N. Braines, Moscow, 1959, chap. 19, p. 212-224.

DESCRIPTORS: *Amino acids, *Urine, *Psychoses, Paper chromatography, Toxins, Excretion, Proteins, Metabolism, Nucleotides.

No significant changes were observed in the amino acid composition of the urine in schizophrenics, which may indicate less obvious biochemical disruptions in case of this disease. There was a decrease in the content of the oxyamino acids serine and threonine, the basic amino acid lysine, and the monoaminocarbonic amino acid lucine (in schizophrenics) as well as a possible increase in the excretion of valine. The changes are pronounced more in patients suffering from a simple form of schizophrenia than in the paranoid type; within the paranoid group these changes were more pronounced in patients suffering from an acute stage of psychosis. (Author)

Mats, D[avid] I[saakovich].
SOCIO-HYGIENIC PROBLEMS OF CONTROLLING CANCER: [SELECTED PARTS]. 9 Nov 62 [55]p. JPRS: 16110.
Order from OTS or SLA $5.60 63-13087

Trans. of mono. Sotsial'no-gigienicheskie Voprosy Protivorakovoi Bor'by, Moscow, 1962, p. 53-87, 120-121, 166-167, 184-192, table of contents.

DESCRIPTORS: *Vital statistics, Tumors, *Cancer classification, Sociology, Public health, Control Inhibition.

Contents:
Malignant tumor statistics
Grouping of patients
Brief conclusions
Further problems of the organization of the struggle for the control of cancer.

Miida, Seido.
EXPERIMENTAL STUDY ON THE INFLUENCE OF NICOTINE UPON THE HEART BY ELECTRO-CARDIOGRAPHY. [1962] 17p.
Order from K-H $11.35 K-H-3439-a

Trans. of Igaku Kenkyu (Japan) 1954, v. 24 [no. 8] p. 1531-1538.

DESCRIPTORS: *Nicotine, Tobacco, *Heart, *Electrocardiography.

Nadgornaya, N. I. and Vinogradskaya, M. A.
ELECTRON MICROSCOPY OF LEUKOCYTE EXTRACTS FROM HUMAN LEUKOSIS PATIENTS. [1961] 7p. 12 refs. NIH Ab-650.
Order from OTS $0.50 62-11157

Trans. of Voprosy Onkologii (USSR) 1956, v. 2, no. 5, p. 528-532.

DESCRIPTORS: *Leukocytes, *Leukemia, Diseases, *Virus diseases, Tissue culture, *Electron, Microscopy.

Electron micrographs revealed virus-like particles in the leukocytes of leukotic patients. The globular formations ranged in size from 50 to 150 millimicrons. They were seen in 33 to 40 cases examined, but were sometimes discovered only after cultivating the leukocytes in vitro. Evidence for a viral origin of leukosis is not yet conclusive.

Olsuf'ev, N. G., Borodin, V. P., and Tsevtkova, E. M
EPICUTANEOUS SKIN TEST WITH TULARIN FROM VACCINE STRAIN TO DETERMINE IMMUNITY IN THOSE INOCULATED AGAINST TULAREMIA AND FOR DIAGNOSIS OF THIS INFECTION (Nakozhnyi Tulyarin iz Vaktsinnogo Shtamma dlya Opredeleniya Immuniteta u Privitykh Protiv Tulyaremii i Diagnostiki Etoi Infektsii). 1960 [8]p. RSTP T-18-60.
Order from OTS $0.50 62-11150

Trans. of mono. Voprosy Epidemiologii i Profilaktiki Tulyaremii (Problems of Epidemiology and Prophylaxis of Tularemia) Moscow, 1958, p. 156-158.

DESCRIPTORS: Tularemia, *Tularemia vaccine, Public health, Diagnosis, Skin, Infections, Immunization, Diseases, Therapy.

In mass population testing, epicutaneous tularin justified itself as a completely specific test, technically much easier to perform than the intracutaneous test. Epicutaneous tularin from the vaccine strain is entirely suitable for detecting the allergic state in those inoculated against tularemia, at various intervals after the vaccination and revaccination, as well as in persons who have had tularemia in the past. Epicutaneous tularin produces a weaker reaction than the intracutaneous tularin, and fewer side effects, in persons who have been inoculated against, or who have had tularemia.

Olsuf'ev, N. G., ed.
PROBLEMS OF EPIDEMIOLOGY AND PROPHYLAXIS OF TULAREMIA: A LIST OF RUSSIAN PAPERS. 1960 [5]p. 23 refs.
Order from OTS $0.50 62-11140

Trans. of mono. Voprosy Epidemiologii i Profilaktiki Tulyaremii, Moscow, 1958 [table of contents].

DESCRIPTORS: *Epidemiology, Preventive medicine, *Tularemia.

Translations of any of the 23 papers listed herein will be furnished by the National Institute of Health upon request from any American scientific journal that wishes to consider publishing it.

Pietzsch, A.
A FURTHUR CONTRIBUTION TO THE SUBJECT OF RETENTION OF SMOKE COMPONENTS IN CIGARETTE SMOKING. [1962] 16p.
Order from K-H $20.00 K-H 12057-b

Trans. of [die] Pharmazie (Germany) 1962, v. 17, no. 1, p. 36-41.

DESCRIPTORS: *Cigarettes, *Smokes, Tobacco, *Lungs, Absorption.

Proosdij, C. van.
TOBACCO USE AND MEDICINE, I. [1962] 16p.
Order from K-H $20.00 K-H-0992-b

Trans. of Nederlands Tijdschrift voor Geneeskunde, 1958, v. 102, 13 Sep, p. 1808-1812.

DESCRIPTORS: *Cigarettes, Smokes, *Tobacco, *Medicine.

Racugno, Vincenzo.
CARCINOMA OF THE PALATE IN SMOKERS WITH "THE FIRE INSIDE". [1962] 12p.
Order from K-H $15.00 K-H 9188 a

Trans. of [Radiobiologia] Radioterapia [e Fisica Medica] (Italy) 1958, v. 13, no. 4, p. 321-330.

DESCRIPTORS: *Cancer, *Cigarettes, Smokes, Tobacco, *Mouth, Respiration.

Racugno, Vincenzo.
LEUKOPLAKIA OF THE PALATE IN SMOKERS WITH THE "FOGU A'INTRU" HABIT. [1962] 13p.
Order from K-H $16.25 K-H 8650 d

Trans. of Radiobiologia, Radioterapia e Fisica Medica] (Italy) 1958, v. 13, no. 2, p. 157-166.

DESCRIPTORS: *Cigarettes, Smokes, Tobacco, *Diseases, *Mouth, Respiration.

Randig, Kurt.
INVESTIGATIONS IN THE ETIOLOGY OF BRONCHIAL CARCINOMAS. [1962] 17p.
Order from K-H $21.25 K-H 5668-a

Trans. of der Öffentliche Gesund[heitsdient] (West Germany) [1953, v. 15] no. 9, p. 305-313.

DESCRIPTORS: Etiology, *Cancer, *Lungs.

Rickmann, L.
CONDIMENTS AND TUBERCULOSIS. [1962] 76p.
Order from K-H $95.00 K-H 3697 b

Trans. of [Ergebnisse der Gesamten Tuberkulose-[und Lungen]forschung] (West Germany) 1953, v. 11, p. 340-372.

DESCRIPTORS: *Condiments, *Tuberculosis.

Ryazantseva, N. E. and Stasilevich, Z. K.
EXPERIMENTAL MEASLES OF KITTENS. [1962] 9p. (figs. omitted) 2 refs.
Order from OTS or SLA $1.10 62-16053

Trans. of Voprosy Virusologii (USSR) 1956, v. 1, no. 1, p. 26-30.
Another trans. is available from SLA as R-2313, 9p.

DESCRIPTORS: *Measles, *Cats, *Immunization, *Monkeys, Blood, Serum, Antibodies, Virus diseases.

The experimental inoculation of kittens with the blood and washings of children ill with measles produced in them virusemia, leukopenia, and in some of the animals a rise of temperature on the 3rd to 7th day after inoculation. On the 4th to 7th day after the inoculation the blood of the kittens contained measles virus, which could be neutralized with the serum of children and monkeys that had passed through the measles illness. On the 21st to 30th day after inoculation the blood of the kittens contained antibodies capable of neutralizing the measles virus. In the initial introduction of the blood of a kitten that had been inoculated with measles into two monkeys no clinically expressed illness developed in these latter. Only the virusemia and the production of antibodies were determined. On the 13th to 15th day after the repeated introduction into the monkey of virulent blood of the kittens, measles-like symptoms appeared in it (cough, hyperemia of the mouth, and a transitory eruption). Twofold introduction into a monkey of the blood of measles-inoculated kittens with an interval of 1 month and 20 days created in it (cough, hyperemia of the mouth, and a transitory eruption). Twofold introduction into a monkey of the blood of measles-inoculated kittens with an interva of 1 month and 20 days created in it a non-susceptibility to infection by the blood of a child suffering from mea sles. A single introduction of the same material did not lead to the production of immunity. (Author)

Safonov, A. G., ed.
NURSES' TRAINING MANUAL, CHAPS. I, X-XIII. 30 Oct 62 [135]p. JPRS: 15952.
Order from OTS or SLA $10.50 62-33660

Trans. of mono. Uchebnik dlya Podgotovki Medsester, Moscow, 1962, p. 3-20, 612-634, 645-651, 653-716.

DESCRIPTORS: *Medical personnel, *Instruction manuals, Public health, *Civilian defense systems, Therapy, *Radiation sickness, Countermeasures, *Chemical warfare agents.

Contents:
Fundamentals of Soviet public health organization
Protection of the population against agents of mass destruction
Organization of medical care, treatment and nursing care of radiation injuries
Medical aid and nursing care for war gas injuries neuroparalytic war gases
The organization and tactics of the civil defense medical service
Table of contents.

Smirnova, E. V. and Ryazantseva, N. E.
CLINICAL MANIFESTATIONS OF EXPERIMENTAL MEASLES IN MONKEYS, ed. by I. A. Utkin, tr. by Paul V. DePorte. 12 Apr 57, 8p. (2 figs. omitted).
Order from OTS $0.50 62-11160

Trans. of mono. [Teoreticheskie i Prakticheskie Voprosy Meditsiny i Biologii v Eksperimente na Obez'yanakh] (Theoretical and Practical Problems of Medicine and Biology in Experiments on Monkeys) [Moscow, 1956] p. 179-182.

DESCRIPTORS: *Primates, *Measles, Virus diseases.

Soloviev, V. D. and Semenov, B. F.
THE INFLUENCE, ON THE ANTIGENIC CHARACTERISTICS OF TYPE 1 POLIOMYELITIS VIRUS, OF PROLONGED IN VITRO CULTURE ON MONKEY KIDNEY CELLS. [1962] 6p. (tables, refs. omitted).
Order from SLA $1.10 62-16234

Trans. of Institut Pasteur, Paris. Annales (France) 1961, v. 100 [no. 6] p. 805-811.

DESCRIPTORS: *Poliomyelitis virus, *Antigens, Primates, Kidneys, Cells (Biology), *Vaccines.

Stanchev, B. and Takeva, T.
TUMOR-INITIATING EFFECT OF TOBACCO. [1962] 5p.
Order from K-H $6.25 K-H 11311

Trans. of Priroda (USSR) 1958, v. 47, no. 11, p. 96-98.
Another trans. is available from OTS or SLA $1.10 as 61-14969 [1961] 4p.

DESCRIPTORS: *Nicotine, *Tobacco, Smokes, Hydrocarbons, Oxidation, *Neoplasms, Etiology.

Syśoev, F. F.
PROWAZEK'S BODIES IN TRACHOMA AND THEIR EPIDEMIOLOGICAL SIGNIFICANCE (Tel'tsa Provacheka pri Trakhome i Ikh Epidemiologicheskoe Znachenie). [1961] 12p. 1 ref. [RSTP] No. 141.
Order from OTS $0.50 62-11152

Trans. of Vestnik Oftamologii (USSR) 1956, v. 69, no. 2, p. 3-9.

DESCRIPTORS: *Trachoma, Infections, Diseases, *Eye, Epidemiology.

After establishment of the existence of stage IV trachom by ordinary methods of investigation, elements of unhealed trachoma remain in almost half of the patients in the form of small focal infiltrations and solitary follicles deeply situated in the tarsal conjunctiva or at the corners of the cartilages (stage III). Prowazek bodies are found even in those in whom the diagnosis of healed trachoma had been established biomicroscopically (convalescent carriage), which is of epidemiological significance. Patients with the so-called forme fruste of trachoma, latent trachoma and microtrachoma are often recorded as healthy in ordinary examinations,

but in practice are virus carriers. Under certain conditions, the characteristic clinical picture of the disease can develop in them, diagnosable even by ordinary methods of examinations. The period of four to six months established for observation of the healed cases (stage IV) should be considered arbitrary. Systematic observation of them should be carried out without definition of periods of time. In view of the relapses observed in those who have been cured, the trachoma (medical) stations in the trachoma foci should be maintained for a certain time even in the event all the patients are cured. (Author)

Tsintsadze, V. V.
LOCAL APPLICATION OF COLD IN CASES OF INFLAMMATORY HYPEREMIA. 3 Dec 62 [11]p. 3 refs. JPRS: 16459.
Order from OTS or SLA $1.60 63-13278

Trans. of Akademiya Nauk Gruzinskoi SSR, Tiflis. Soobshcheniya, 1962, v. 29, no. 2, p. 229-234.

DESCRIPTORS: *Inflammation, Adaptation (Physiology), *Hypothermia, Ear, *Hyperthermia, Blood vessels, Constriction, Receptors, Reflexes, Sensory perception, Temperature perception, Nerves.

The direct application of a cold stimulus does not deprive the inflamed ear's vessels of their ability to contract. The inflamed ear's receptors and sensory nerves receive and transmit the cold stimulus. Receptors and sensory nerves in the focus of inflammation receive and transmit the cold stimulus. The normal "cold reflex" in the inflamed ear's vessels cannot be brought on from the intact ear. Vessels in the inflamed tissues respond to the vasoconstrictive action of centrogenic caffeine. Changes in the intensity of blood flow in the area surrounding the focus of inflammation have a decisive effect on the intensity of blood flow in the focus of inflammation. (Author)

Volkova, L. T.
REACTIONS OF THE CENTRAL NERVOUS SYSTEM TO LOSS OF BLOOD IN THE THIRD STAGE OF LABOR (Reaktsiya Tsentral'noi Nervovoi Sistemi na Krovovtratu v Tret'omu Periodi Rodiv). 1960, 12p. RSTP Ab-1476-60.
Order from OTS $0.50 62-11156

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR 1956, no. 5, p. 49-53.

DESCRIPTORS: *Childbirth, *Blood, *Body weight, Cerebral cortex, Nervous system, Motor reactions, Reactions (Psychology), Hemorrhage.

Of 130 patients under our observation, in 38 (29.2 percent) the third period of labor was accompanied by loss of blood exceeding 0.5 percent of the body weight. Such blood loss is connected with the presence of certain signs of delayed development (late onset of menstruation, uterine dystocia during labor) in 25 of the 38 patients. Shortening of the latent period of responsive motor reactions to a light stimulus in the second stage of labor is regarded as the consequence of a certain activation of the higher divisions of the central nervous system, especially activation of the kinesthetic zone of the cerebral cortex in this stage of labor. Blood loss exceeding 0.5 percent of the body weight of the patient is accompanied by a transient slowing down of responsive motor reactions to the light stimulus (for eight to ten minutes), whereas blood loss equal to one percent or more of the body weight of the patient evokes a greater duration of these changes (12 to 15 minutes) in the latent period in the direction of prolongation. Slowing of responsive reactions to the light stimulus, which occurs under the influence of acute blood loss, is regarded as a result of changes in the functional stage of the central nervous system in the direction of a predominance of the inhibitory process. (Author)

Wacker, L. and Schmincke, A.
EXPERIMENTAL INVESTIGATIONS REGARDING THE CAUSAL GENESIS OF ATYPICAL EPITHELIAL PROLIFERATIONS. [1962] 12p.
Order from K-H $15.00 K-H-9249-f

Trans. of Münchener Medizinische Wochenschrift (Germany) 1911 [v. 58] no. 31, p. 1680-1682.

DESCRIPTORS: Etiology, *Epithelium, Pathology, Cells (Biology), Growth.

Wieske, Reinhold.
EVALUATING FILTER CIGARETTES. [1962] 13p.
Order from K-H $16.25 K-H 3850

Trans. of Zeit[schrift] für Lebens[mittel]-Untersuchung und -Forschung (West Germany) 1955, v. 102, p. 123-127.

DESCRIPTORS: *Cigarettes, *Smokes, Tobacco, *Particulate filters.

Yurasovskaya, V. K.
INVESTIGATION OF TOXIC PROPERTIES OF URINE FROM SCHIZOPHRENICS IN EXPERIMENTS WITH ANIMALS. [1962] 9p. 12 refs.
Order from OTS or SLA $1.10 62-14696

Trans. of mono. '[Voprosy Eksperimental'noi Patologii' (Problems of Experimental Pathology) [ed. by] S. N. Braines, Moscow, 1959, p. 225ff.

DESCRIPTORS: *Toxicity, *Urine, *Psychoses, Excretion, Animals.

Zhukovitskii, I. M.
CANCER OF THE LUNGS AND SMOKING [Rak Legkikh: Kurenie]. [1962] 5p.
Order from K-H $6.25 K-H 8258

Trans. of Fel'dsher i Akusherka (USSR) 1957, v. 22 [no. 3] p. 46-48.

DESCRIPTORS: *Cancer, *Lungs, Smokes, Tobacco, *Cigarettes.

Pharmacology and Toxicology

APPARATUS FOR IMPREGNATING CIGARETTE PAPER WITH A COMBUSTION AGENT. [1962] 6p.
Order from K-H $7.50 K-H 3138-d

Trans. of [published] Japanese patent 28-2154 [1953].

DESCRIPTORS: *Cigarettes, *Paper, Impregnation, *Combustion.

CIGARETTE PAPER FOR NEUTRALIZING OR ATTENUATING THE EFFECT OF TOXIC PRODUCTS (PARTICULARLY NICOTINE FOR SMOKERS). [1962] 3p.
Order from K-H $3.75 K-H 5412-c

Trans. of French patent 998,652, gr. 20, cl. 2 [1952].

DESCRIPTORS: *Tobacco, *Cigarettes, *Paper, *Nicotine, Neutralization, Attenuation.

DEVICE FOR USE IN THE CONSUMPTION OF TOBACCO BY COMBUSTION. [1962] 6p.
Order from K-H $7.50 K-H 9372-a

Trans. of French patent 932,560 [1948].

DESCRIPTORS: *Tobacco, Consumption, *Combustion.

Radiobiology

Amorosa, M.
4-HYDRAZINE BENZENE SULFAMIDES. [1962] 10p.
Order from SLA $1.10 62-10289

Trans. of Farmaco [Scienza e Tecnica] (Italy) 1948, v. 3, no. 4, p. 389-396.

DESCRIPTORS: *Hydrazines, Benzenes, *Drugs, *Sulfonamides. Stability.

Barac, G.
GUANETHIDINE, RESERPINE AND ACUTE OLIGURIA DUE TO BURNS IN DOGS (Guanéthidine, Réserpine et Oligurie Aigue de la Brûlure chez le Chien). Jan 62, 2p. 5 refs.
Order from SLA $1.10 62-14318

Trans. of J[ournal de] Physiol[ogie] (France) 1961, v. 53 [no. 2] p. 260

DESCRIPTORS: *Guanethidine, *Reserpine, Urine, Diuretics, Secretion, *Burns, Drugs.

Beiglböck, W. and Brummund, W.
THE ANABOLIC EFFECT OF TESTOSTERONE DERIVATIVES: REPORT OF EXPERIENCE WITH DIANABOL (Zur Frage der Anabolen Wirkung von Testosteronderivaten: Bericht über Erfahrungen mit Dianabol). July 61, 31p. refs.
Order from SLA $3.60 61-18579

Trans. of die Medizinische Welt (West Germany) 1960, v. 22, p. 1192-1205.

DESCRIPTORS: *Drugs, Metabolism, *Testosterone, *Dianabol, Hormones, Steroids, *Toxicity, Pharmacology.

Burmeister, W., Zapp, E., and Krick, L.
INFLUENCE OF DIANABOL ON GROWTH AND BODY COMPOSITION OF HEALTHY INFANTS (Uber den Einfluss von Dianabol auf das Wachstum sowie auf die Körperzusammensetzung Gesunder Säuglinge). [1962] 6p. 9 refs.
Order from SLA $1.10 62-14320

Trans. of [die] Medizinische Welt (West Germany) 1961, no. 23, p. 1269-1271.

DESCRIPTORS: *Dianobol, Drugs, Growth, *Infants, Body weight, Body fluids, Body fats, Cells(Biology).

0.1 mg./Kg. Dianabol was given for 5 months to 11 healthy infants. In addition to a coordinated acceleration of growth in weight and length a 10% increase of the fluid volume, determined with the thiosulfate method, was found. Nevertheless it is probable that the weight gain is caused essentially by a growth of the cell mass and that the composition of the latter is not influenced by Dianabol. (Author)

Cottet, Jean, Mathivat, A., and Redel, J.
THERAPEUTICAL STUDY OF A SYNTHETIC HYPOCHOLESTEROLIC AGENT PHENILETHILACETIC ACID. 11 Oct 55, 20p. (2 figs. omitted) 29 refs.
Order from SLA $1.60 62-14934

Trans. of la Presse Médicale (France) 1954, v. 62 [no. 44] p. 939-941.

DESCRIPTORS: *Drugs, Therapy, *Cholesterol, Reduction, Arteriosclerosis, Food, Pharmacology, *Metabolism, *Fats, *Acetic acids.

The phenylethylacetic acid, a new synthetic hypocholesterolic agent (Hyposterol) was studied both on an experimental and on a clinical level. 101 patients were treated with this medication for periods varying from two to ten consecutive weeks. They were divided into four groups according to the initial cholesterol content. In six weeks the decrease is 40% for an average cholesterol content of 4.83g%; 27.5% for an average cholesterol content of 2.82g%; 11% for an average cholesterol content of 2.17g%; and only 3% for an average cholesterol content of 1.85g%. Thus the decrease of the cholesterol content is more accentuated when the initial rate is higher and practically nil when the initial rate is normal or close to normal.

Eroshin, V. K. and Krasil'nikov, N. A.
SELECTIVE MICROBIOLOGICAL OXIDATION OF THE 11-HYDROXY GROUP OF HYDROCORTISONE. [1962] 3p.
Order from ATS $5.00 ATS-53P64R

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1961, v. 137, no. 4, p. 968-969.

DESCRIPTORS: Microbiology, *Oxidation, *Cortisone, Hydroxides.

Faerchtein, I.
FIRST RESULTS WITH THE USE OF GUANETHIDINE IN TREATING SEVERE HYPERTENSION (Primeiros Resultados Com o Uso da Guanetidina no Tratamento da Hipertensao Arterial Grave). [1962] [6]p. [figs. omitted] 5 refs.
Order from SLA $1.10 62-16119

Trans. of Medicina, Cirurgia, Farmácia (Brazil) 1961, no. 291, p. 1-6.

DESCRIPTORS: *Drugs; *Guanethidine, Therapy, *Hypertension, Toxicity, Blood pressure.

Guanethidine was given orally to 14 patients for a minimum of 12 weeks and all patients had previously been treated with reserpine and thiazide derivatives and continued with these drugs. In those who had been using mecamylamine or chlorisondamine, the ganglionic blocker was replaced by guanethidine. There occurred an appreciable fall of blood pressure in 10 cases and this effect was prolonged and predominantly postural. Treatment was begun with doses of 10 or 12.5 mg. daily with increases of 10 to 25 mg. at 3-7 day intervals according to the response. The most frequent side effects were due to postural hypotension, diarrhea, bradycardia and nasal congestion. In 4 cases the time for ejaculation was prolonged, and sometimes there was marked reduction in the quantity of ejaculate. (Author)

Faraone, Giuseppe.
CONCERNING CRIMINAL ADMINISTRATION OF CRUSHED GLASS (A Proposito di Somministrazione Criminosa di Vetro Pesto). [1962] [37]p. (foreign text included) 25 refs.
Order from SLA $3.60 62-16149

Trans. of Archivio di Antropologia Criminale, Psichiatria e Medicina Legale (Italy) 1940, v. 60, p. 762-779.

DESCRIPTORS: Poisoning, *Poison tolerance, *Glass, Digestive system, Criminology.

From experiments carried out on dogs is seen the harmlessness of the massive administration of small fragments of glass and the possible lack of a lethal effect also of large, sharp, and numerous fragments. There are considered the suppositions of perpetrated or attempted homicide with this "internal mechanical injuring agent" (etiopathogenic definition) either forced administration, in which case the attempt at homicide would be envisionable, or by administration of the glass as a supposed "insidious means" (juridical definition); in the latter case the attempt would be impossible because of unsuitability of the means or of the action. (Author)

Garn, F. W. and Kimbel, K. H.
THE RETENTION AND EXCRETION OF LONG-ACTING SULFON-AMIDES. [1962] [17]p. (figs. tables refs. formulae omitted).
Order from SLA $1.60 62-16256

Trans. of Arzneimittel-Forschung (West Germany) 1961, v. 11, no. 8, p. 701-707.

DESCRIPTORS: *Drugs, *Sulfonamides, Absorption, Excretion, Blood plasma, *Albumins,

Gheorghe, Spiridon.
HOMONEURINES OF COCAINE, CODEINE, NICOTINE AND PAPAVERINE. [1962] 8p.
Order from K-H $10.00 K-H 5796 a

Trans. of Academia Republicii Populare Romine. Communicarile (Rumania) 1955, v. 5, no. 5, p. 821-825.

DESCRIPTORS: *Poisons, *Amines, *Codeine, *Nicotine, *Opium alkaloids.

Gyorgy, Lajos, Doda, Margit, and Nador, Karoly.
THE ROLE OF STEROCHEMICALLY DIFFERENT QUATERNARY GROUPS WITH REGARD TO THE DEVELOPMENT OF THE PARASYMPATHOLYTIC AND GANGLION-BLOCKING EFFECTS OF TROPEINES. 20 Nov 61 [21]p. JPRS: 11139.
Order from OTS or SLA $2.60 62-19486

Trans. of Magyar Tudomanyos Akademia Biologiai es Orvosi Tudomanyok Osztalyanak Kozlemenyei (Hungary) [1961] v. 12, no. 1/2, p. 167-175.

DESCRIPTORS: *Quaternary amines, *Drugs, *Atropine, *Acetylcholines, Cholinesterase, Pharmacology, Diphenyl, Glycolic acids, Methyl radicals, Esters, Carboxylic acids, Blood pressure, Mydriatics, *Autonomic nervous system, *Nervous system.

The parasympatholytic effect of tropine tropate (atropine) is decreased on increasing the steric size of the quaternizing group, at the same time the ganglion-blocking effect is considerably increased; other tropines (benzilic acid, xanthene-9-carboxylic acid esters) do not exhibit this double alteration although both esters possess, in their tertiary forms, a parasympatholytic activity similar to that of atropine. Chemical structure plays a decisively greater role in the development of the ganglion-blocking effect than the fact that all three tropine esters have equal parasympatholytic activity in their tertiary forms.

Heidenreich, O., Kook, K., and Reus, E.
ACTION OF SYNTHETIC HYPERTENSIN ON BLOOD SUGAR (Die Wirkung von Synthetischem Hypertensin auf den Blutzucker). Dec 61, 4p. 5 refs.
Order from SLA $1.10 62-10967

Trans. of Klin[ische] W[ochen]schr[ift] (Germany) 1961, v. 39 [no. 14] p. 759.

DESCRIPTORS: *Hypertensin, Synthesis, Drugs, Pharmacology, *Blood sugar, Anesthesia, *Shock (Pathology), Man, Dogs.

Heymans, C. and Vleeschhouwer, G. R. de.
PHARMACOLOGIC ACTION OF THE DIETHYL-AMINOETHYL ESTER OF PHENYLCYCLOPENTANE CARBOXYLIC ACID (PARAPANIT). [1962] 28p.
Order from K-H $28.75 K-H 5028

Trans. of Arch[ives] Int[ernationales de] Pharmacodyn[amie et de Thérapie (Belgium) 1948, v. 75, no. 3/4, p. 307-324 and 413-414.

DESCRIPTORS: Drugs, Pharmacology, *Cyclopentanes, *Phenyl radicals, *Carboxylic acids, Esters, Amines.

Il'yuchenok, R. Yu., Smirnova, A. V. and others.
PARTICIPATION OF MESENCEPHALIC RETICULAR FORMATION IN THE MECHANISM OF THE ACTIVATING EFFECT OF ARECOLINE AND THE BLOCKING ACTION OF CHOLINOLYTIC AGENTS [AND] SEARCH FOR EFFECTIVE COMPOUNDS AFFECTING THE PERMEABILITY OF TISSUES UNDER RADIATION CONDITIONS. 21 Nov 62 [26]p. 45 refs. JPRS: 16283.
Order from OTS or SLA $2.60 63-13301

Trans. of #Farmakologiya i Toksikologiya (USSR) 1962, v. 25, no. 4, p. 401-410 and 462-466.

DESCRIPTORS: *Brain, *Reticulo-endothelia system, Drugs, *Adaptation (Physiology), Electroencephalography, *Tranquilizing drugs, *Pyridine derivatives, Tissues (Biology), *Radiation effects, Inhibition, Permeability, Rutin, Cholines.

In the action of arecoline on the central nervous system, of definite importance is its effect on the reticular mesencephalic formation, the stimulation of which may explain the arecoline-induced activation reaction. In the mechanism of the blocking effect of arecoline activation by the central cholinolytic substances, an important role is played by their action on the cholinoreactive systems of the mesencephalon. (Il'yuchenok) Derivatives of alpha- and gamma-pyrone were tested in regard to their effect on tissue permeability following irradiation. The compounds of gamma-pyrone series proved to be of little effect, whereas the derivatives of alpha pyrone possess sufficient activity as compared with that of rutin. Among the compounds of the alpha-pyrone series the most effective and, at the same time, of low toxicity proved to be the complexes of esculetin with sodium bisulfate and esculetin with sodium borate. (Smirnova) In view of the fact that in the alpha-pyrone series effective substances have been discovered which reduce permeability caused by X-ray irradiation, further search is expedient for active preparations among the derivatives of this series. (Author)

Ivanova, R. A., Laricheva, K. A., and Mil'shtein, G. I.
DESCRIPTION OF AN EXPERIMENTAL PSYCHOSIS INDUCED BY LYSERGIC ACID DIETHYLAMINE.
2 Nov 62 [17]p. 12 refs. JPRS: 16002.
Order from OTS or SLA $1.60 62-33706

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1962, v. 62, no. 9, p. 1359-1363.

DESCRIPTORS: *Psychoses, *Drugs, Dogs, Toxicity, *Lysergic acid derivatives, Serotonin, Acetylcholines, Adrenalin, Metabolism, Behavior.

The project treated here aimed at studying the effect of diethylamide of lysergic acid on certain types of trained behavior in dogs and on biochemical indicators which would to a certain degree describe the status of serotonin, acetylcholine and adrenalin metabolism.

Jeney, Endre and Zsolnai, Tibor.
EXPERIMENTS FOR THE DISCOVERY OF NEW TUBERCULOSTATIC AGENTS. I. HYDRAZINE DERIVATIVES, CARBOXYLIC ACIDS, PHENOLS AND QUATERNARY AMMONIUM COMPOUNDS AND THEIR INTERMEDIATES. [1962] 13p. 2 refs.
Order from SLA $1.60 62-16264

Trans. of [Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten. Abt. 1. Originale (East Germany) 1956, v. 167, p. 55-64].

DESCRIPTORS: *Drugs, Therapy, *Tuberculosis, *Hydrazines, *Carboxylic acids, *Phenols, *Quaternary amines, Pharmacology.

An investigation was carried out of the tuberculostatic action of hydrazones and of substituted and non-substituted phenylhydrazones of acid hydrazides, arylhydrazines, aldehydes and ketones of other hydrazine derivatives; oximes of the aliphatic, aromatic and heterocyclic carboxylic acids, carboxylic acid esters and amides, aldehydes, ketones and phenols which serve as initial products of these compounds--a total of 175 compounds. The higher aliphatic fatty acids, the phenol derivatives, and mainly those which are substituted with halogens, are generally highly tuberculostatic. (Author)

Kagan, Yu. S.
TOXICITY AND SOME TOXICODYNAMIC PROBLEMS OF NEW ORGANOPHOSPHORUS INSECTICIDES. [1962] 6p.
Order from ATS $8.25 ATS-72P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, Tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 458-462.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Insecticides, Organic compounds, Phosphorus compounds, *Toxicity.

Kitamura, T.
PHARMACOLOGICAL STUDIES ON COMPOUNDS RELATED TO NICOTINE, ESPECIALLY ON NORNICOTINE. [1962] 35p.
Order from K-H $43.75 K-H 9054-c

Trans. of Nihon Yakurigaku Zasshi (Japan) 1958, v. 54, p. 825-837.

DESCRIPTORS: *Tobacco, Pharmacology, Alkaloids, *Nicotine.

Knoll, Jozsef, Kelemen, Karoly and others.
EXPERIMENTAL ANALYSES OF SPASMODIC HYDRAZIDES. 20 Nov 61 [19]p. JPRS: 11134.
Order from OTS or SLA $1.60 62-19489

Trans. of Magyar Tudomanyos Akademia Biologiai es Orvosi Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1961, v. 12, no. 1/2, p. 157-165.

DESCRIPTORS: *Drugs, *Spasms, Muscles, Stimulation, *Tranquilizing drugs, *Hydrazines, Hypnotics and sedatives, Vitamine B complex, Isoniazid, Pharmacology, *Carbazides.

The spasmodic action of TSC, SC and INH (Thiosemicarbazide, semicarbazide and isonicotinic acid hydrazide) is due to the blocking of enzyme systems catalyzed by Vitamin B_6 (most probably l-glutamic acid decarboxylase) and to an unknown mechanism. These

experiments support our view that the mode of action of hydrazides is due to factors besides decarboxylase blocking. Phenobarbital, chloral hydrate, Noxiron, Dorlotin, paraldehyde, urethane, bromide were examined to determine the influence of sedato-hypnotics and tranquilizers on spasms and death caused by hydrazides. Phenobarbital proved to be the best antagonist. Diphenylhydantoin has no effect. The major tranquilizers (Reserpine, Largactil, N 702) were ineffective. The effect spasmodics which act via mechanisms other than decarboxylase blocking is increased by administration of subliminal doses of hydrazide. The greatest increase in spasmodic effect is shown by tetracor, caffeine and corediol. On cocaine, actedron and strychnine which show a much lower increase in spasmodic effect, individual hydrazides exert different influence. The action of prostigmine is not affected by hydrazides. In mice, both normal and hypermotility caused by actedron is blocked by subliminal doses of hydrazide. This blocking effect can be antagonized by an appropriate dose of Vitamine B_6. (Author)

Kuzhman, M. I.
THE MODE OF ACTION OF COCAINE UPON THE RESPIRATION OF BRAIN TISSUE. [1962] [8]p. 7 refs.,
Order from OTS or SLA $1.10 62-14692

Trans. of Vopr[osy] Med[itsinskoi] Khim[ii] (USSR) [1960] v. 6, no. 2, p. 188-191.

DESCRIPTORS: *Alkaloids, Drugs, Pharmacology, *Respiration, *Brain, Inhibition, Tissues (Biology), Cells (Biology), Oxidation, Flavins, Enzymes.

Addition of cocaine to the cerebral pulp of rats caused a decrease in oxygen consumption at the expense of oxydation of endogenic substrata as well as upon addition of glucose, lactic and pyroracemic acids. Addition of succinic acid decreases oxygen consumption to a lesser degree. Glycolysis is not impaired. The dehydrase activity in the brain is considerably inhibited by cocaine but the oxydation of para-phenylen-diamine is not impaired. At the same time cocaine is a powerful inhibitor of the enzyme d-amino acid oxydase. The suggestion is made that cocaine may affect cell respiration through inhibition of the flavin enzymes. (Author)

Lange, J. and Belzecki, C.
A NEW ROUTE FOR THE SYNTHESIS OF D, L-EPHEDRINE. Pt. 4 of the Reaction of Aliphatic Epoxy Compounds. [1962] 4p.
Order from ATS $6.75 ATS-51P63P

Trans. of Acta Polon[iae] Pharm[aceutica] 1961, v. 18, no. 3, p. 177-181.

DESCRIPTORS: Aliphatic compounds, *Epoxides, Chemical reactions, Drugs, *Ephedrine, Synthesis.

Liola, N.
ON THE HEALTH CONDITIONS OF FEMALE TOBACCO WORKERS. [1962].
Order from K-H $36.25 K-H 10693 d

Trans. of il Tabacco (Italy) 1959 [v. 63] no. 693, p. 431-443.

DESCRIPTORS: *Physical fitness, *Women, *Tobacco, Cigarettes.

Lutterotti, A. v.
ANTIHISTAMINE THERAPY OF DISTURBANCES OF RHYTHM (Behandlung von Rhythmusstörungen mit Antihistaminika). [1962] 5p. 11 refs.
Order from SLA $1.10 62-16907

Trans. of Deutsche Ges[ellschaft für] Kreislaufforsch-[ung]. Verh[andlungen] (West Germany) 1960, v. 26, p. 269-272.

DESCRIPTORS: Drugs, *Antihistaminics, Therapy, Pathology, Heart, Rhythm, Allergy, Corticosteroids.

Synthetic antihistaminics were used successfully in 8 cases of disturbances of cardiac rhythm (5 with auricular fibrillation, 1 with flutter, 2 with paroxysmal tachycardia). These patients had no other cardiac or circulatory disturbances, but sometimes an allergic history or signs of liver or intestinal insufficiency.

Meyer, F. and Meyer, E.
DETECTION OF EUGENOL, ISOEUGENOL AND VANILLIN. [1962] 13p.
Order from K-H $16.25 K-H 9817-a

Trans. from Archiv der Pharmazie (West Germany) 1957, v. 290, no. 3.

DESCRIPTORS: Detection, *Eugenol, *Benzaldehydes, Detection (Chemical), Drugs.

Mihich, E., Prino, G., and Bonacina, F.
STUDY OF THE CENTRAL ANTINICOTINIC ACTIVITY OF THE DIETHYLAMINOETHYL ESTER OF DIPHENYLPROPYLACETIC ACID. [1962] 4p.
Order from K-H $5.00 K-H 6049-c

Trans. of il Farmaco; Edizione Scientifica (Italy) 1959, v. 11, no. 11, p. 907-917.

DESCRIPTORS: *Drugs, Nervous system, *Nicotine, Inhibition, Pharmacology, Ethyl radicals, Amines, Phenyl radicals, Propyl radicals, Acetic acids, Esters.

Naalsund, Odd.
TRICHLORETHYLENE TOXICITY [Trikloretylen-forgiftning]. [1962] 4p. (refs. omitted).
Order from SLA $1.10 62-18224

Trans. of Nordisk Medicin (Sweden) 1954, v. 51 [no. 11] p. 376-377.
Another trans. is available from SLA $1.10 as 62-14039 [1961] 8p.

DESCRIPTORS: *Poisoning, *Vinyl chlorides, Toxicity, Diagnosis, Ethylenes, Chlorides.

For abstract see Technical Translations 8: 116, 1962.

Pérès, G., Zwingelstein, G., and Bange, C.
EFFECTS OF ALDOSTERONE ON THE SUGAR METABOLISM OF NORMAL AND ADRENALECTOMIZED RATS (Effets de l'Aldostérone sur le Métabilosme Glucidique du Rat Normal et du Rat Surrénalectomisé). Feb 62, 4p. 15 refs.
Order from SLA $1.10 62-14322

Trans. of Soc[iété de] Biol[ogie et de ses Filiales]. C[omptes] R[endus des Séances] (France) 1961, v. 155 [no. 4] p. 790-792.

DESCRIPTORS: Drugs, *Aldosterone, *Carbohydrates, *Metabolism, Rats, Excision, *Adrenal glands, Proteins.

Aldosterone acts on the sugar metabolism by increasing the liver glycogen depot in normal as well as in adrenalectomized rats and by raising the level of the markedly lowered blood sugar seen after adrenalectomy. This phenomenon is accompanied by a reduction in the free amino nitrogen in the plasma and a distinct hyperproteinemia. Aldosterone acts on the sugar and protein metabolism according to its own specific modalities. (Author)

Pyriki, C[onstantin] and Fritzsche, J.
ON THE QUESTION OF THE EFFICACY OF FILTER CIGARETTES. [1962] 22p.
Order from K-H $27.50 K-H 5131-a

Trans. of Z[eitschrift für] Lebensmittel-[Untersuchung] u[nd]-Forschung (West Germany) 1956, v. 103, p. 113-121.

DESCRIPTORS: *Cigarettes, *Particulate filters, *Smokes, Effectiveness.

Rohrlich, M.
THE PREPARATION OF NICOTINIC ACID. [1962] 5p.
Order from K-H $6.25 K-H 3902-c

Trans. of Archiv der Pharmazie (West Germany) 1951, v. 284, p. 6-7.

DESCRIPTORS: Preparation, *Nicotinic acid.

Schmidt-Voigt, Jörgen.
DECREASING HARMFUL EFFECTS BY "FILTERED" SMOKE. [1962] 19p.
Order from K-H $23.75 K-H 3138-e

Trans. of Ärztl[iche] Woch[enschrift] (Germany) 1953, v. 8, no. 17, p. 416-420.

DESCRIPTORS: *Cigarettes, *Smokes, Tobacco, *Toxicity, Countermeasures, Particulate filters.

Schreiber, F. K.
ON THE TREATMENT OF DIABETIC NEUROPATHY. 20 Sep 61 [9]p. 41 refs.
Order from SLA $1.10 62-14916

Trans. of Deutsche Med[izinische] W[ochen]sc[hrift] (West Germany) 1961, v. 86 [no. 12] p. 531-532 and 535.

DESCRIPTORS: *Diabetes, Pathology, *Nerves, Drugs, Therapy, *Actanoic acids.

Schroeter, H. B.
BIOLOGICAL METHYLATIONS. [1962] 60p.
Order from K-H $75.00 K-H 3738 c

Trans. of [die] Pharmazie (Germany) 1955, v. 10, p. 141-157.

DESCRIPTORS: *Biology, Biochemistry, *Methyl radicals, *Substitution reactions.

Sokolovskii, V. V.
CONCERNING THE HEMOLYTIC ACTION OF THIOL POISONS. 23 Nov 62 [12]p. 22 refs. JPRS: 16304.
Order from OTS or SLA $1.60 63-13261

Trans. of Tsitologiya (USSR) 1962 [v. 4] no. 4, p. 460-465.

DESCRIPTORS: *Hemolysins, *Thiols, *Poisoning, Oxidizers, Erythrocytes, Inhibition, Resistance, Osmotic pressure.

Thiol poisons of the mercaptide-forming, oxidizing and alkylating types produce hemolysis of erythrocytes in in vitro experiments. Hemolytic action by oxidizers can be prevented by thiol substances (2, 3 dimercaptopropane sodium sulfonate). An essential role in the preservation of the spatial structure of erythrocytes belongs to their sulfhydryl groups. (Author)

Takeda, Masae.
THE INFLUENCE OF SEVERAL DRUGS ON THE ACTION OF NICOTINE. [1962] 77p.
Order from K-H $96.25 K-H 9477-c

Trans. of Nihon Yakurigaku Zasshi (Japan) 1958, v. 54, p. 762-790.

DESCRIPTORS: *Drugs, Pharmacology, *Nicotine.

Vlachova, D.
SIMPLE METHOD FOR DETERMINATION OF TRICHLORETHANOL IN URINE (Jednoduchá Metoda na Stanovení Trichlorethanol v Moci) tr. by P. DePorte. 16 Oct 59, 10p. 4 refs.
Order from OTS or SLA $1.10 59-22093

Trans. of Pracovni Lekarstvi (Czechoslovakia) 1956, v. 8, p. 433-435.

DESCRIPTORS: Determination, *Ethanols, *Chlorides, *Excretion, *Urine, Rats, *Anesthetics.

A method is described for the determination of trichlorethanol in the presence of trichloracetic acid in urine. In urine, a determination was made of trichloracetic acid created in the organism, by itself and on the other hand, together with trichloracetic acid arising from the oxidation of trichlorethanol. Split from trichlorethanolglucuronide by means of $K_2Cr_2O_7$ in H_2SO. The difference in both values represents the amount of trichloracetic acid equivalent to the amount of trichlorethanol. The lowest level that can be determined is 10 micrograms of trichlorethanol/ml. of urine. (Author)

Yamoto, Iwao, Kurogochi, Yutaka and others.
EFFECTS OF NORNICOTINE AND THIAMINE ON THE AUTONOMIC GANGLION. [1962] 22p.
Order from K-H $27.50 K-H 8599-c

Trans. of Nara Igaku Zasshi (Japan) 1958, v. 9, p. 36-47.

DESCRIPTORS: *Nicotine, *Thiamine, *Autonomic nervous system, *Ganglia, Pharmacology, Drugs.

Yankina, V. P.
AN EXPERIMENTAL STUDY OF THE TOXICITY OF METHYL VIOLET (BASIC VIOLET K) DYE. [1962] 3p.
Order from ATS $6.25 ATS-03P63R

Trans. of Gigiena i Sanit[ariya] (USSR) 1961, v. 26, no. 3, p. 96-97.

DESCRIPTORS: *Dyes, Methyl radicals, *Aniline derivatives, Toxicity.

Zaugol'nikov, S. D.
THE TOXICOLOGY OF ORGANOPHOSPHORUS COMPOUNDS. [1962] 5p.
Order from ATS $9.75 ATS-08P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 480-484.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Organic compounds, *Phosphorus compounds, *Toxicity.

Zymalkowski, Felix and Trenktrog, Bodo.
A NEW NICOTINE SYNTHESIS. Aug 60, 10p.
Order from K-H $12.50 K-H 10265-f

Trans. of Archiv der Pharmazie (West Germany) 1959 [v. 292] no. 1, p. 9-[4]. Another trans. is available from SLA mi$1.80, ph$1.80 as 61-10904 [1961] 10p.

DESCRIPTORS: Alkaloids, *Nicotine, Synthesis.

For abstract see Technical Translations 5: 597, 1961.

Hartweg, Helmut.
THE EFFECT OF CYSTEINE ON THE COURSE OF THE RADIATION REACTION IN THE BONE MARROW FOLLOWING LOCAL RADIATION (Haematologische Untersuchungen zur Schutzstoffwirkung. 2 Mitteilung: Die Wirkung von Cystein auf den Ablauf der Strahlenreaktion am Knochenmark nach Lokalbestrahlung). Pt. 2 of Hematological Investigations on the Action of Protective Agents. [1962] 15p. (figs. omitted).
Order from SLA $1.60 62-16222

Trans. of Strahlentherapie (West Germany) [1957] v. 102 [no. 1] p. 65-72.

DESCRIPTORS: *Cysteine, *Radiation effects, Bone marrow, *Inhibition, *Radioprotective drugs, Hemopoiesis.

See also 62-16221

Hartweg, Helmut.
THE EFFECT OF CYSTEINE ON THE COURSE OF THE RADIATION REACTION IN THE BONE MARROW FOLLOWING WHOLE-BODY RADIATION (Haematologische Untersuchungen zur Schutzstoffwirkung. I. Mitteilung: Die Wirkung von Cystein auf den Ablauf der Strahlenreaktion am Knochenmark nach Körperganzbestrahlung). Pt. 1 of Hematological Investigations on the Action of Protective Agents. [1962] 17p. (figs. omitted).
Order from SLA $1.60 62-16221

Trans. of Strahlentherapie (West Germany) 1956, v. 100 [no. 2] p. 259-268.

DESCRIPTORS: *Cysteine, *Radiation effects, Drugs, *Radioprotective drugs, *Bone marrow, Hemopoiesis, Inhibition.

See also: 62-16222

Semenov, L. F.
THE USE OF STREPTOMYCIN IN THE PREVENTION OF ACUTE RADIATION SICKNESS. 3 Dec 62 [10]p. 16 refs. JPRS: 16471.
Order from OTS or SLA $1.10 63-13270

Trans. of #Antibiotiki (USSR) 1962, v. 7, no. 10, p. 912-916.

DESCRIPTORS: *Streptomycins, *Radiation sickness, *Radioprotective drugs, Inhibition.

A single prophylactic administration of streptomycin, dihydrostreptomycin, and a mixture of streptomycin with penicillin, immediately prior to irradiation exerts no protective effect. Simultaneous combination in the prophylaxis of radiation sickness of sulfur-containing or amino-containing agents with streptomycin reduces their protective antiradiation effect. Therapeutic administration of streptomycin, starting on the 2nd day following irradiation exerts a positive effect and increases the effect of prophylactic protective agents. (Author)

Tatsievskii, V. A.
THE STATE OF THE HEMATO-ENCEPHALITIC BARRIER (H. E. B.) AND CERTAIN OTHER HISTO-HEMATIC BARRIERS IN THE PROGENY OF ANIMALS WHO HAD SUSTAINED ACUTE RADIATION SICKNESS. [1962] [7]p. (1 fig. omitted) 5 refs.
Order from OTS or SLA $1.10 62-14739

Trans. of #Meditsinskaya Radiologiya (USSR) 1961 [v. 6] no. 3, p. 17-21.

DESCRIPTORS: *Hemato-encephalic barrier, *Radiation sickness, Genetics, Permeability, Radiation effects.

Wittmer, G.
THE EFFECTS OF IRRADIATION ON NICOTIANA. [1962] 8p.
Order from K-H $10.00 K-H 8650 e

Trans. of il Tabacco (Italy) 1958 [v. 62] no. 686, p. 46-52.
Another trans. is available from SLA mi$1.80, ph$1.80 as 61-10878 [1961] 8p.

DESCRIPTORS: *Radiation effects, *Tobacco, *Alkaloids.

Surgery

RECENT SOVIET DEVELOPMENTS IN ANESTHESIOLOGY. 29 Oct 62 [22]p. 44 refs. JPRS: 15931.
Order from OTS or SLA $2.60 62-33674

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1962, v. 17, no. 8, p. 3-10 and 25.

DESCRIPTORS: *Anesthesia, *Electromyography, Neuromuscular transmission, *Motor reactions, *Xenon, Rare gases.

Contents:
Electromyography in modern anesthesiology, by V. A. Kovanev and Ya. M. Khmelevskii
Xenon anesthesia in man, by L. N. Buachidze and V. P. Smol'nikov.

SOVIET RESEARCH ON BONE AND SKIN TRANSPLANTATION. 2 Nov 62 [43]p. 41 refs. JPRS: 16000.
Order from OTS or SLA $4.60 62-33705

Trans. of Vestnik Khirurgii (USSR) 1962, v. 89, no. 8, p. 24-42 and 74-76.

DESCRIPTORS: *Plastic surgery, *Transplantation, *Bone, Preservation, Tissues (Biology), Morphology, *Skin, *Radiation sickness, Injuries, *Burns, Phosphorus, Necrosis.

Contents:
Clinical use of embryonic bone transplantations, preserved in paraffin, by K. M. Lisitsyn
Morphological changes in free skin homotransplantation during experimental acute radiation sickness, by K. K. Zaitseva
Early skin plasty in open injuries, by V. S. Antipenko
Experience of the use of homo- and automotransplantation of the skin in the clinic, by K. E. Bronnikov
Phosphorus burn, by V. I. Golubinskii
Early necrectomy during free skin autoplasty, by M. A. Surpina

Lopez Engelking, Raul and Palomo, Tomas.
URINARY INCONTINENCE SECONDARY TO EPISPADIAS IN A FEMALE TREATED WITH THE MARSHALL MARCHETTI TECHNIQUE (Incontinencia Urinaria Secundaria a Epispadias Femenino Simple Tratado con la Tecnica de Marshall Marchetti). [1962] 9p. (16 figs. omitted).
Order from SLA $1.10 62-10959

Trans. of Gaceta Médica de México, 1959, v. 89, Sep, p. 753-765.

DESCRIPTORS: Urine, Excretion, *Congenital anomalies, *Urinary tract, *Plastic surgery.

We describe a maneuver equivalent to that of Marchetti to determine the result of retropubic suspension of the urethra. This is applicable in cases in which Marchetti's test is not feasible. The patient's incontinence was treated with the technique of Marshall Marchetti with an excellent result. We believe that we are the first to utilize this technique for the treatment of incontinence in female epispadias. (Author)

Pavsna, G. I.
SIMPLIFIED TECHNIQUE OF REMOVAL OF PARAMETRIAL TISSUE IN THE WERTHEIM-GUBAREV OPERATION (Do Pitannya pro Sproshchenu Tekhniku Vidalennya Navkolomatkovi Klitkovini pri Operatsiyakh Vertgeima-Gubareva) 1960, 9p. RSTP Ab-1516-60.
Order from OTS $0.50 62-11159

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR) 1955, no. 6, p. 54-57.

DESCRIPTORS: *Uterus, *Cancer, *Surgery, Tissues (Biology), Surgical trauma, X-rays, Therapy, Radium, Lymph.

The bloodless removal of tissues and the minimal trauma permit the use of our method both in the most advanced cases and especially in the removal of lymph nodes (the Taussig procedure), in cases in which the lymph nodes must be removed following combined radiation therapy. (Author)

Shreiber, M. I., Sovchuk, L. N. and others
THE USE OF POLYMER FILMS FOR THE LOCAL TREATMENT OF BURNS [AND] THE EFFECT OF STORAGE ON THE IMMUNOLOGICAL PROPERTIES OF TISSUES. 9 Nov 62 [10]p. JPRS: 16112.
Order from OTS or SLA $1.10 63-13086

Trans. of Eksperimental'naya Khirurgiya i Anesteziologiya (USSR) 1962, v. 7, no. 4, p. 62-67.

DESCRIPTORS: *Burns, Therapy, Polymers, *Plastic films, Vinyl alcohol, Transplantation, *Immunology, Antibodies, Storage, Tissues (Biology).

THE SEA OTTER, tr. by A. Birron and Z. S. Cole. 1962, 227p. 305 refs. PL-480 Int.
Order from OTS $2.25 61-31057

Trans. of mono. Kalan, Moscow, 1947 [267]p.

DESCRIPTORS: *Aquatic animals, *Mammals, Biology, Economics, *Reproduction, Ecology, *Adaptation (Physiology), *Nutrition, Distribution, Marine biology.

Contents:
The sea otter (Enhydra Lutris L.) Biology and economic problems of breeding, by I. I. Barabash-Nikiforov
Acclimatization of sea otters, by V. V. Reshetkin and N. K. Shidlovskaya
Directions for the feeding and care of the male sea otter, by N. K. Shidlovskaya.

Berg, Leo S.
FRESHWATER FISHES OF THE USSR AND ADJACENT COUNTRIES (Ryby Presnykh vod SSSR i Sopredel'nykh Stran) tr. by Omry Ronen. 1962, 504p. refs. PL-480 Smi.
Order from OTS $5.00 61-31218

Trans. of [Opredeliteli po Faune SSSR, 1948/49] v. 27, pt. 1, 4th. ed. rev. [466p.].

DESCRIPTORS: *Fishes, *Marine biology, *Classification, Distribution, Morphology.

Boev, S. N.
LUNG NEMATODES OF HOOFED ANIMALS IN KAZAKHSTAN, tr. by Michael Artmna. 1962, 178p. 174 refs. PL-480 Agr.
Order from OTS $1.75 61-31217

Trans. of mono. Legochnye Nematody Koptnykh Kopytnykh Zhivotnykh Kazakhstana, Alma-Ata, 1957 [175p.].

DESCRIPTORS: *Nematodes, Classification, *Animals, Cattle, Sheep, Parasitic infections, Ecology, Epidemiology, Disease carriers.

Likhachev, I. M. and Rammel'meier, E. S.
TERRESTRIAL MOLLUSKS OF THE FAUNA OF THE USSR (Nazemnye Mollyuski Fauny SSSR) tr. by Y. Lengy and Z. Krauthamer. 1962, 574p. refs. PL-480 Smi.
Order from OTS $5.75 60-21816

Trans. of [Opredeliteli po Faune SSSR] 1952, v. 43, 511p.

DESCRIPTORS: *Mollusca, Morphology, Physiology, *Ecology, Plants, Biology, *Gastropods, Classification, Distribution.

Morisaburo, Tauchi.
ON THE STOCK OF SPRING HERRING IN HOKKAIDO, tr. by Hack Chin Kim. Apr 59 [7]p. 4 refs.
Order from OTS or SLA $1.10 60-17430

Trans. of [Nihon Suisan Gakkaishi] (Japan) 1948, v. 13, no. 5, p. 207-209.

DESCRIPTORS: Fishes, Ecology, *Herring, Reproduction, Migration area, Oceanography, *Marine biology.

The present study statistically shows that the variation on the yield of spring herring in Hokkaido is resulted mainly by the oceanographical conditions of fishing ground. (Author)

Shevareva, T. P., ed.
BIRD BANDING IN THE USSR. 19 July 62 [384]p. JPRS: 14526.
Order from OTS or SLA $21.00 62-32008

Trans. of Byuro Kol'tsevaniya. Trudy (USSR) 1957, v. 9, p. 1-4, 46-143, 208-214, 223-319.

DESCRIPTORS: *Birds, *Identification, Distribution, Ecology, Biology.

Contents:
Introduction
Seasonal migration of gray herons (Ardea cinerea L.) according to USSR banding data, by Yu. A. Isakov
Table of data of the Bureau of Banding on returned bands from blue-gray herons (Ardea cinerea L.)
Seasonal distribution and migration of the seagull (Larus genei Breme) according to banding data and visual observations, by S. M. Semenov and B. V. Sabinveskii
Table of data of the Bureau of Banding on returned bands from seagulls (Larus genei Breme)
New information on the distribution and ecology of the seagull (Larus genei Breme) by N. N. Bakeev and others
Seasonal distribution and migration of the Scandinavian silver herring gull (Larus argentatus omissus Pleske) according to USSR banding data, by S. M. Uspenskii
Table of data of the Bureau of Banding on returned rings from Scandinavian silver herring gulls (Larus argentatus omissus Pleske) according to USSR banding data
The biology of the ruddy shelduck (Tadorna ferruginea Pall) by A. G. Bannikov and P. P. Tarasov
Table of data of the Bureau of Banding on returned bands from starlings (Sturnus vulgaris L.)
Settling and migration of the great titmouse (Parus major L.) by G. N. Likhachev
Table of data of the Bureau of Banding on returned bands from great titmice (Parus major L.)
Results of banding thrushes (Turdus sp.) by E. Ya. Taurin'sh
Table of data of the Bureau of Banding on returned bands from the fieldfare (Turdus pilaris L.)
Table of data of the Bureau of Banding on returned bands from the song thrush (Turdus ericetorum Turton)
Table of data of the Bureau of Banding on returned bands from the redwing (Turdus musicus L.)
Table of data of the Bureau of Banding on returned bands from the blackbird (Turdus merula L.)
Results of banding certain species of shore birds, by M. I. Lebedev

Table of data of the Bureau of Banding on returned bands from the golden plover (Charadrius apricarius L.)
Table of data of the Bureau of Banding on returned bands from the lapwing (Vanellus vanellus L.)
Table of data of the Bureau of Banding on returned bands from the dunlin (Calidris alpina L.)
Table of data of the Bureau of Banding on returned bands from the ruff (Philomachus pugnax L.)
Table of data of the Bureau of Banding on returned bands from the oyster catcher (Haematopus ostralegus L.)
Mass spring flight of certain species of amphibious birds in the vicinity of the Pukhtu ornithological station, Estonian SSR, by A. Yu. Yygi
Table of data of the Bureau of Banding on returned bands from black-throated divers (Gavia artica L.).
See also 62-11001 and 61-13963

CHEMISTRY

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 38 (CHEMISTRY SERIES) [AND] (BIOCHEMISTRY SERIES). 15 Nov 62 [11]p. JPRS: 16198.
Order from OTS or SLA $1.60 63-13100

Trans. of selected abstracts from Referativnyi Zhurnal. Khimiya (USSR) 1962, no. 14; and Referativnyi Zhurnal. [Khimiya]. Biologicheskaya [Khimiya] (USSR) 1962, no. 8.

DESCRIPTORS: *Abstracts, *Chemistry, *Biochemistry, China, Physical chemistry, *Geochemistry, *Organic compounds, Synthesis, *Polymers, *Radiochemistry.

AGENT FOR PROTECTION FROM GNATS AND OTHER INSECTS AND A METHOD FOR PREPARING IT. [1962] 4p.
Order from K-H $5.00 K-H 5034

Trans. of Swedish patent 45,904, n. d.

DESCRIPTORS: *Insecticides, Preparation, Insects, *Gnats.

CHEMICAL ABSTRACTS, 1941, VOL. 4, NO. 1: [SELECTED ABSTRACTS]. [1961] 7p.
Order from OTS or SLA $1.10 61-20792

Trans. from Khimicheskii Referativnyi Zhurnal (USSR) 1941, v. 4, no. 1, p. 51, 85-86, 118-123, 136, 142.

DESCRIPTORS: *Abstracts, *Chemistry, *Butanols, *Carbon dioxide, Hydrogen, *Hydrocarbons, *Benzenes, *Oils, Surface properties, *Shales, *Lubricants, *Mineral oils, Oxidation, *Sulfur compounds, *Fuels, Acids, *Ethylenes, *Synthetic rubber, Styrenes, *Asphalt.

Contents:
Dehydrogenation of normal butyl alcohol, by M. M. Movsum-Zade
Method of determination of small amounts of carbon dioxide, hydrogen and hydrocarbons, by A. A. Cherepennikov
Determination of benzene by adsorption with activated carbon, by Yu. I. Chernyaeva
Surface-molecular properties of oils, by K. E. Zinchen Zinchenko
Effect of surface-active components of oil on its filtration, by K. E. Zinchenko
Physico-chemical investigation of processes of mutual displacement of oil and water in sand layers, by K. E. Zinchenko
Physics and chemistry of surface phenomena in oil technology, by M. M. Kusakov and K. E. Zinchenko
Cracking of topped Gdov shale tar, by M. M. Gerasimov and V. E. Glushnev
Hydrodynamics of lubricating greases, II, by V. P. Varentsov and E. G. Batalova
Oxidation inhibitors for mineral oils, I, by S. E. Krein
Oxidation inhibitors for mineral oils, II, by S. E. Krein
Burning of sulfurous mazuts from Ural-Volga fields in fire boxes of stationary boilers, A. I. Dvoretskii
Temperature coefficient of preflame reactions and the
Investigation of wear of STZ engines depending upon the viscosity of the crankcase oil, by Z. M. Osobov
Use of Saratov acid sludge, by L. F. Zasobin and A. A. Frid
Copolymerization of mixtures of olefins and diolefins by metallic sodium, by V. N. L'vov
Styrene rubber, by G. N. Zel'dovich
Interaction of asphalt emulsions with fillers, by E. S. Medvedkov and A. F. Sukhina.

CHEMICAL ABSTRACTS, 1941, VOL. 4, NO. 2: [SELECTED ABSTRACTS]. [1961] 4p.
Order from OTS or SLA $1.10 61-20791

Trans. from Khimicheskii Referativnyi Zhurnal (USSR) 1941, v. 4, no. 2, p. 11-12, 14, 40-42, 45, 88, 93-95.

DESCRIPTORS: *Abstracts, *Chemistry, Gases, *Combustion, *Nickel compounds, Oxides, *Acetylenes, Hydrocarbons, *Metalorganic compounds, Decomposition, *Asphalt, *Oils, *Petroleum, *Styrenes, Polymers, Insulating materials, Heptyne.

Contents:
Spontaneous ignition and combustion of gases, by A. S. Sokolik
Change of the properties of oxides of nickel in vacuum, by S. P. Tevosov
Preparation of symmetrical acetylene hydrocarbons with the aid of the Iotsich (Jocicz) complex, by M. S. Malinovskii and S. D. Fedoseev
Preparation of 1-heptyne, by V. A. Kuz'min
Synthesis of hydrocarbons by interaction of acetal of heptanal with magnesium-organic compounds, by I. V. Grinberg
Splitting metal-organic compounds with acetyl chloride and aluminum chloride, by M. S. Malinovskii
High melting asphalt compositions, by A. F. Klimkova
New Volga oils: Syzran oil, by V. V. Chelintsev and others
New Volga oils: Stavropol oil, by V. V. Chelintsev and others
Physics and chemistry of surface phenomena in oil technology. III. Washing out Ukhta oil from natural fromations, by M. Kusakov and others
Styrene polymers from petroleum gas tar, by I. S. Mustafin
Insulating material from polymerized oil, by Yu. N. Van-Gaut.

CHEMICAL ABSTRACTS, 1941, VOL. 4, NO. 3: [SELECTED ABSTRACTS]. [1961] [1]p.
Order from OTS or SLA $1.10 61-20790

Trans. from Khimicheskii Referativnyi Zhurnal (USSR) 1941, v. 4, no. 3, p. 96-97 and 122.

DESCRIPTORS: *Abstracts, *Chemistry, *Oils, Tractors, Regeneration, *Absorbents, Metals, Acids, *Corrosion.

Contents:
Behavior of crank case oils in gas generating tractors, by I. V. Rodin
Regeneration of oils with solid sorbents, by S. N. Nikitin and E. G. Tabakova
Formation of acid in corrosion of metals in some grounds, by A. V. Solov'ev.

CHEMICAL ABSTRACTS, 1941, VOL. 4, NO. 6: [SELECTED ABSTRACTS]. [1961] 7p.
Order from OTS or SLA $1.10 61-20787

Trans. from Khimicheskii Referativnyi Zhurnal (USSR) 1941, v. 4, no. 6, p. 3, 5, 16, 48, 103-104, 107-108, 111, 114, 125, 133-134, 136-137, 139.

DESCRIPTORS: *Abstracts, *Chemistry, *Rubber, *Acetylene, *Petroleum, *Dienes, Benzoates, *Asphalt, *Oils, Transformers, Acids, *Fuels, *Nitrates, *Catalysts, *Colloids, Rectifiers, Fractionation, Metals, Alloys, *Corrosion research, *Plastics, *Coatings

Contents:
Investigation of polymers. VI. Crystallization of rubber, II, by E. E. Lysenko
Spectral study of acetylene-air flame in ultrahigh frequency, by V. S. Rossikhin and V. P. Timkovskii
Internal structure of petroleum, by V. E. Popova
Reaction of hexadiene and piperylene with p-benzoquinone, by B. A. Arbuzov and S. M. Spekterman
Neutralization of crude benzol with aqueous ammonia, by A. P. Rutman
Chemical investigation of the liquid portion of Syukeev asphalt, by I. A. Zaitsev and P. I. Novospasskii
Transformers using sovtol oils, by V. A. Kozlinskii
Fire boxes for acid sludge, by P. P. Mochalov
Fuel from hydrolyzed hulls, coal pitch and fuel oil, by G. Petrov and A. Grigor'ev
Nitrates as nitrating agents, by V. G. Georgievskii
Dehydration catalysts, by I. Osnos and I. Golovistikov
Stable technical emulsions, by A. K. Chertavskikh
Calculation of rectification, by N. M. Karavaev
Graphical method of calculation of fractionation of a binary mixture with the aid of the diagram t-i-x, by N. A. Alyavdin
Stability of special metals and alloys in mineral acids, by I. Ya. Klinov
Asbovinyl-material for chemical machine building, by G. I. Shakhovtsev
Investigation of protective coatings in the atmosphere of an industrial region, by S. G. Vedenkin and others.

[TRANSACTIONS (REPORTS) OF THE ACADEMY OF SCIENCES OF THE USSR] 1946, VOL. 51, NO. 6: [TABLE OF CONTENTS AND SELECTED ABSTRACTS]. [1962] 3p. 8 refs.
Order from OTS or SLA $1.10 62-10804

Abstract trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1946, v. 51, no. 6, p. 429-435 and 457-460.

DESCRIPTORS: Luminescent materials, *Phosphors, *Geophysical prospecting, Seismic waves, *Liquids, Mixtures, Viscosity, *Abstracts.

Contents:
Identity of centers of long-lived and short-lived light emission in organoluminophors, by B. Ya. Sveshnikov
A combined method for seismic prospecting, by G. A. Gamburtsev and others
Viscosity of liquid mixtures, by G. M. Panchenkov

Ipekoglu, F. and Aksu, S.
RESEARCHES ON DOMESTIC PYRETHRUM. [1962] 7p.
Order from K-H $8.75 K-H 3006-e

Trans. of Inhisarlar Tutun Institusu. Raporlari (Turkey) 1943, v. 3, no. 1, p. 36-49.

DESCRIPTORS: *Insecticides.

Montel, Gerard.
INSERTION COMPOUNDS (INCLUSION COMPOUNDS) [Sur les Composés d'Insertion]. [1962] [11]p. 31 refs.
Order from SLA $1.10 62-10011

Trans. of Soc[iété] Chim[ique] de France. Bull[etin] 1955 [no. 7/8] p. 1013-1017.

DESCRIPTORS: *Clatherate compounds, Molecular structure, Lattices, Chemical properties, Stability, Chemical reactions.

Murahashi, Shunsuke and Horie, Shigeki.
REACTIONS OF CARBON MONOXIDE. 1 May 62, 53p. 11 refs.
Order from SLA $5.60 62-16964

Trans. of Yuki Gosei Kagaku Kyokai Shi (Japan) 1960, v. 18 [no. 1] p. 15-30.

DESCRIPTORS: *Carbon compounds, *Monoxides, Chemical reactions, *Oxo process, Reduction, Alcohols, Acids, Catalysis, Esters, Aldehydes, Ketones, Halides, Ethers, *Azo compounds, Benzines, Anilines, *Free radicals, Polymers, *Metalorganic compounds, *Alkali metal compounds, Alkaline earth metals, Transition elements.

The recent major progress of CO chemistry is emphasized.

Office of Technical Services, Dept. of Commerce, Washington, D. C.
ORGANIC CATALYSTS. PART II: AROMATIC COMPOUNDS AND GENERAL CONCEPTS AND THEORY. Aug 62, 13p. 180 refs. OTS Selective Bibliography SB-506.
Order from OTS $0.10 OTS SB-506

DESCRIPTORS: *Bibliography, Organic compounds, *Catalysts, Theory, Hydrogenation, Dehydrogenation, Desulfurization, Synthesis, Preparation, Hydrolysis, Reaction kinetics, Molecular association, Oxidation, Reduction, Dehydration, Halogenation, Nitriles, Purification, Condensation, Statistical analysis, Regeneration, Chemical bonus.

Lists 180 domestic and foreign references on organic catalysts added to the OTS collection during the period 1959 to August 1962. Includes reports on hydrogenation, dehydrogenation, synthesis and preparations, hydrolysis kinetics, molecular rearrangements, demethylation, oxidation, reduction, dehydration, platforming, alkylation, halogenation, desulphurization, Friedel-Crafts reactions, nitriles, refining, aromatization, mechanisms, cyclization, condensation, alkoxylation, bond energy, structural and energetic factors, stereochemical studies, theory of reaction rates, statistical methods, electron bond, regeneration of catalysts and others. (Author)

Stephen, H. and Stephen, T., eds.
DICTIONARY OF CHEMISTRY AND CHEMICAL TECHNOLOGY: ENGLISH, GERMAN, POLISH, RUSSIAN. June/July 62, 724p.
Order from PP $30.00

DESCRIPTORS: *Dictionaries, *Chemistry, *Chemical engineering, Language, Germany, Poland, English language, USSR.

Analytical Chemistry

PROCESS FOR DENICOTINIZATION OF TOBACCO. [1962] 4p.
Order from K-H $5.00 K-H 3964-g

Trans. of Swiss patent 71,801, n. d.

DESCRIPTORS: *Tobacco, Cigarettes, *Nicotine, Separation.

Boethin, T. and others.
RAPID METHOD FOR THE VOLUMETRIC DETERMINATION OF ZIRCONIUM IN ZIRCONIUM SILICATE. Oct 62, 900 words.
Order from HB $2.60 HB-5577

Trans. of Chemische Technik (East Germany) 1961, v. 13, no. 6, p. 365-366.

DESCRIPTORS: *Zirconium compounds, *Silicates, Zirconium, Determination, *Volumetric analysis.

Buslaev, Yu. A., Gorbunova, Yu. E., and Gustyakova, M. P.
ZIRCONIUM AND HAFNIUM OXYFLUORIDES, tr. by Martha W. Gerrard. [1962] 9p. 8 refs.
Order from OTS or SLA $1.10 AEC-tr-5117

Preliminary, unedited trans. of #Akad[emiya] Nauk SSSR. Otdelenie Khim[icheskikh] Nauk. Izvestiya, 1962, no. 2, p. 195-201.

DESCRIPTORS: *Zirconium compounds, *Hafnium compounds, *Oxyfluorides, Hydrolysis, Thermochemistry, X-ray diffraction analysis, Tables.

The compositions of the hydrolysis products of zirconium and hafnium tetrafluoride trihydrates were determined. A thermal analysis was made on the starting materials and products. In a series of cases data from thermal analysis were satisfactorily explained by representing the oxyfluorides as tetramers. (Author)

Egorov, Yu. P. and Lubuzh, E. D.
THE USE OF INFRARED SPECTRA IN THE C-H STRETCHING VIBRATION REGION FOR THE DETERMINATION OF THE STRUCTURE OF ALKALINES, AROMATIC HYDROCARBONS, AND COMPOUNDS CONTAINING HETERO ATOMS. [1962] 5p.
Order from ATS $7.85 ATS-47P64R

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1961, v. 136, no. 2, p. 342-345.

DESCRIPTORS: *Alkanes, *Hydrocarbons, *Heterocyclic compounds, *Infrared spectroscopy, Carbon, Hydrogen, Chemical bonds, Vibration.

Flaschka, H.
THE REDUCER BURETTE, AN AID IN VOLUMETRIC DETERMINATION. [1962] 3p. (tables refs. omitted).
Order from SLA $1.10 62-16987

Trans. of Analytica Chimica Acta (Netherlands) 1950, v. 4 [no. 3] p. 242-244.

DESCRIPTORS: *Laboratory equipment, *Volumetric analysis, Reduction.

Giovannozzi, Mario.
CONCERNING THE REFERENCE TO THE VALUES OF THE CHEMICAL ANALYSIS OF TOBACCOS. [1962] 10p.
Order from K-H $12.50 K-H 11999-a

Trans. of il Tabacco (Italy) 1956, v. 60 [no. 681] p. 347-351.

DESCRIPTORS: *Chemical analysis, *Tobacco.

Izawa, Masao, Kobashi, Yusuke and others.
DISTRIBUTION OF NICOTINE IN CIGARETTE- SMOKE AND BUTTS: COMPARISON OF KING SIZE AND REGULAR SIZE CIGARETTES. Pt. II(2) of Studies on Tobacco Smoke. [1962] 11p.
Order from K-H $13.75 K-H 6063-f

Trans. of [Nihon Senbai Kosha Chuo Kenkyusho Kenkyu Hokoku] (Japan) 1956, no. 96, p. 86-90.

DESCRIPTORS: Tobacco, Smokes, *Cigarettes, *Nicotine, Distribution.

Kanai, Isao and Baba, Yoko.
WHITENESS OF CIGARETTE ASH. [1962] 16p.
Order from K-H $20.00 K-H 11153-a

Trans. of [Nihon Senbai Kosha Chuo Kenkyusho Kenkyu Hokoku] (Japan) 1961, no. 103, p. 19-24.
Another trans. is available from SLA $1.60 as 61-20883 [1961] [17]p.

DESCRIPTORS: *Cigarettes, *Tobacco, *Ash, Inorganic substances, *Reflectometers, *Photoelectric cells, Combustion.

For abstract see Technical Translations 8: 230, 1962.

Krasznai, Istvan and Toth, Zoltan.
INVESTIGATION OF THE DETERMINATION OF 1,3-CHLOROBROMOPROPANE IN THE PRESENCE OF ITS 1,2-ISOMER BY MEANS OF AN ACETONE SOLUTION OF SODIUM IODIDE. [1962] 14p. (tables omitted) 6 refs.
Order from SLA $1.60 62-16263

Trans. of Magyar Kemiai Folyoirat (Hungary) 1961, v. 67 [no. 1] p. 36-40.

DESCRIPTORS: *Chlorine compounds, *Bromine compounds, *Propanes, Determination, *Molecular isomerism, Acetones, Sodium compounds, Iodides.

By investigating the reaction between 1,3- and 1,2-chlorobromopropane and the acetone solution of sodium iodide the following facts were established. A small amount of sodium bromide separates out from 1,2-chlorobromopropane under the influence of the acetone solution of sodium iodide at 26°C during a reaction time of 14 to 16 hours. At the same time the solution turns brown as a result of the separation out of iodine. The sodium bromide precipitate (analyzed with 0.01 N solutions) contains no sodium iodide or sodium chloride. Approximately 0.35% of the charge of 1,2-chlorobromopropane is converted into 1,2-chloroiodopropane. From 1,3-chlorobromopropane under conditions identical to those above, on the average a precipitate containing 2.82% sodium iodide, 0.48% sodium chloride, and 96.43% sodium bromide is obtained which behaves as 99.48% sodium bromide when titrated according to Volhard. A procedure was worked out by means of which 1,3-chlorobromopropane can be determined in the presence of the 1,2-isomer with an error of ±1.7%.

Kreshkov, A. P., Bykova, L. N., and Kazaryan, N. A.
THE DIFFERENTIAL TITRATION OF MIXTURES OF STRONG, WEAK, AND VERY WEAK ACIDS IN METHYETHYL KETONE MEDIA. [1962] 6p.
Order from ATS $8.65 ATS-12P64R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Khim[iya] i Khim[icheskaya] Tekhnol[ogiya] (USSR) 1961, v. 4, no. 1, p. 20-24.

DESCRIPTORS: Methyl radicals, Ethyl radicals, *Ketones, *Acids, Titration.

Kubec, Z. and Svrdlik, M.
A QUARTZ APPARATUS FOR THE PYROHYDROLYTIC DETERMINATION OF FLUORINE. [1962] 6p.
Order from ATS $10.00 ATS-57P64C

Trans. of Chem[icke] Listy (Czechoslovakia) 1958, v. 52, p. 2018-2021.

DESCRIPTORS: Quartz, *Laboratory equipment, *Fluorine, Determination, Hydrolysis, Pyrolysis.

Kuffner, Friedrich and Raderl, Norbert.
PAPERCHROMATOGRAPHY OF PYRIDINE MONO- AND DICARBOXYLIC ACIDS AS WELL AS FROM ALKYLPYRIDINES. [1962] 15p.
Order from K-H $18.75 K-H 5072-b

Trans. of Monatshefte für Chemie (Austria) 1955, v. 86, no. 6, p. 995-1003.

DESCRIPTORS: *Pyridines, *Carboxylic acids, Alkyl radicals, *Paper chromatography.

Litvinova, N. F., Malyshev, V. I., and Turovtzeva, Z. M.
DETERMINATION OF OXYGEN IN SODIUM AND IN THE ALLOY NaK. 1962, 4p.
Order from MUL $4.00 MUL-T62-6

Trans. of Akad[emiya] Nauk SSSR. Kom[issiya po] Analit[icheskoi] Khimii. Trudy, 1960, v. 10[13] p. 97-102.

DESCRIPTORS: *Alkali metal alloys, Sodium, *Sodium alloys, *Potassium alloys, *Oxygen, Determination, Vacuum furnaces, Melting.

Mikhailov, M. K.
THE SHMUK METHOD OF DETERMINING POLYPHENOLS IN TOBACCO [O Metode Shmuka dlya Opredeleniya Polifenolov v Tabake]. [1962] 8p.
Order from K-H $10.00 K-H 9900-b

Trans. of Tabak (USSR) 1959, v. 20, no. 2, p. 41-43. Other translations are available from OTS or SLA $1.10 as 62-10908 [1962] [6]p. and from LC or SLA mi$1.80, ph$1.80 as 61-15172, CSIRO Trans-4941 [1960] [7]p.

DESCRIPTORS: *Tobacco, Chemical analysis, *Phenols, Determination, Paper chromatography.

For abstract see Technical Translations 5: 287. 1961.

Mikhailov, M. K.
WILKINSON'S PHILLIP'S AND BACOT'S METHOD FOR DETERMINING CHLOROGENIC ACID IN TOBACCO. [1962].
Order from K-H $7.50 K-H-10833-a

Trans. of Bulgar[ska] Akad[emiya na] Nauk[ite] Dokl[ady] 1960, v. 12, no. 6, p. 525-528.

DESCRIPTORS: Organic acids, *Tobacco, Determination, *Chlorogenic acids.

Muel, Bernard and Lacroix, G.
CHARACTERIZATION AND DOSAGE (TITRATION) 3,4-BENZPYRENE BY MEANS OF LUMINESCENT SPECTROPHOTOMETRY AT 190 C. [1962] 29p.
Order from K-H $23.75 K-H 10969-c

Trans. of Soc[iété] Chim[ique de] France. Bull[etin] 1960, no. 11/12, p. 2139-2147.

DESCRIPTORS: *Benzopyrenes, *Spectrographic analysis, Luminescence, Titration, Dosage.

Ollero Gomez, A. and Cota Galan, R.
CHEMICAL METHOD OF DETERMINING THE NICOTINE CONTENT. Pt. 1 of Studies on Selection of Tobacco Plants for Their Nicotine Content. [1962] 35p.
Order from K-H $43.75 K-H-2762-b

Trans. of Inst[ituto] Nac[ional de] Inv[estigaciones] Agron[omicas]. Bol[etin] (Spain) 1951, v. 11 [no. 25] p. 1-27.

DESCRIPTORS: *Tobacco, Plants, *Nicotine.

Piguet, G. and Lausanne, A.
DETERMINATION OF NICOTINE BY PHYSICOCHEMICAL CONDUCTIVITY. [1962] 4p.
Order from K-H $5.00 K-H 5398-c

Trans. of Mitt[eilungen aus dem Gebiete der] Lebensmitteluntersuchung und Hygiene (Switzerland) 1930, v. 21, p. 312-314.

DESCRIPTORS: Determination, *Nicotine, Conductivety, Chemical analysis.

Rundshagen, H.
METHODOLOGICAL ASPECTS OF DENICOTINIZATION QUESTION. [1962] 11p.
Order from K-H $13.75 K-H 3993-c

Trans. of Chemiker Zeitung (West Germany) 1929, v. 53, no. 74, p. 717-718.

DESCRIPTORS: Cigarettes, Smokes, *Tobacco, *Nicotine, Separation.

Scarascia, Maria Elisa and Giovannozzi, G.
ANALYTICAL RESEARCHES ON NICOTIANA TABACUM WITH CHROMATOGRAPHY ON PAPER. I. VARIATION OF THE SUGARS DURING THE VEGETATIVE CYCLE OF FOUR VARIETIES. [1962] 19p.
Order from K-H $23.75 K-H 3384 b

Trans. of il Tabacco (Italy) 1954, v. 58, Aug/Sep, p. 264-278.

DESCRIPTORS: Chemical analysis, *Tobacco, *Paper chromatography, *Carbohydrates, Nicotine.

Schröter, Hans-Botho and Engelbracht, Lisabeth.
DETECTION OF NORNICOTINE IN LOCALIZED TOBACCO ROOTS. [1962] 5p.
Order from K-H $6.25 K-H 12159-b

Trans. of Archiv der Pharmazie (West Germany) 1957 [v. 290] no. 4, p. 204-206.

DESCRIPTORS: Detection (Chemical), *Alkaloids, *Tobacco, *Nicotine.

Sedlatschek, Wilhelm.
STANDARDIZATION OF FILLING CAPACITY OF CUT TOBACCO. [1962] 29p.
Order from K-H $36.35 K-H 6690 b

Trans. of Fachliche Mitteilungen der Österreichischen Tabakregie (Austria) 1957, no. 2, p. 8-21.

DESCRIPTORS: *Tobacco, Cigarettes, *Standards, Processing.

Spira, Heinz.
SEMIMICRO METHOD FOR CHROMATOGRAPHIC INVESTIGATION OF LUBRICATING OILS. [1962] 25p. 8 refs.
Order from SLA $2.60 62-14433

Trans. of Erdöl und Kohle (West Germany) 1960, v. 13 [no. 1] p. 27-32.

DESCRIPTORS: *Lubrication, *Oils, *Chromatographic analysis, Resins, Refineries, Distilling plants, Microchemistry.

A method for the chromatographic investigation of small amounts of lubricating oil (about 0.5 g) is described. It is shown with reference to examples how this method may be applied to the study and testing of processing techniques. A study of lubricating oils aged in the engine or in the laboratory showed that the resin fractions obtained by this method may serve as criteria of the degree of aging. An attempt was made in engine test runs to relate the appearance of the piston to the results of the chromatographic analysis. The time of the oil breakdown was characterized by the sudden increase of the resin content. Studies of the refining characteristics of lubricating oils by this method can afford valuable information about structural changes in the oils during their processing. Experiments of this type were carried out in sulfuric acid refining, in selective refining with furfural, and in deparaffination with methyl ethyl ketone. (Author)

Tolmachev, V. N and Lomakina, G G.
SPECTROPHOTOMETRIC DETERMINATION OF THE DISSOCIATION CONSTANTS OF SODIUM 1,8-DIOXY-2 (2'-OXYAZOBENZENE) -3,6- NAPHTHALENE DISULPHONATE, tr. by F. E. Wallwork. Sep 61 [14]p. 8 refs. AWRE/Trans/20; [DSIR] NLL M. 4613.
Order from OTS or SLA $1.60 62-25563

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1957, v. 31, no. 5, p. 1027-1032.

DESCRIPTORS: *Sodium compounds, Benzenes, Napthalenes, *Sulfonates, Dissociation, Spectrographic analysis, Chemical indicators.

The absorption spectra have been studied of "metal indicators" - 1,8-dioxy-2-(2' oxyazobenzene)-3,6 naphthalene disulphonate. With the aid of a spectrophotometric method the constants of the ternary

dissociation of the dye are found to be $K_1 = 2.8 \times 10^{-8}$, $K_2 = 5.3 \times 10^{-10}$, $K_3 = 4.0 \times 10^{-13}$. (Author)

Wada, Einosuke.
STUDY OF CHEMICAL CONSTITUENTS OF TOBACCO. III. ISOLATION OF KAEMPFEROL-3-RHAMNOGLUCOSIDE FROM. [1962] 9p.
Order from K-H $11.25 K-H 3263 b

Trans. of [Nihon Nogei-Kagakkai Shi] (Japan) 1952, v. 26, p. 159-162.

DESCRIPTORS: *Tobacco, Chemical analysis, *Glucosides.

Wagner, O.
A STANDARD METHOD FOR THE DETERMINATION OF NICOTINE. [1962] 8p.
Order from K-H $10.00 K-H-5497-c

Trans. of Chemiker Zeitung (Germany) 1932 [v. 56] no. 47, p. 462ff.

DESCRIPTORS: Determination, *Nicotine, Chemical analysis.

Wang, K.-T.
PAPER CHROMATOGRAPHY OF PHENOLS ON PAPER IMPREGNATED WITH A POLYAMIDE. [1962] 4p.
Order from ATS $8.00 ATS-44N55G

Trans. of Riechstoffe und Aromen (West Germany) 1960, v. 10, p. 158-159.

DESCRIPTORS: *Phenols, Paper chromatography, Paper Impregnation, Polymers, *Amides.

Wegner, Erich.
ON THE USE OF PAPER CHROMATOGRAPHY FOR PROBLEMS IN TOBACCO RESEARCH (A CONTRIBUTION TO THE SEPARATION AND DETECTION OF SUGARS, POLYPHENOLS, AND ALKALOIDS). [1962] 13p.
Order from K-H $16.25 K-H 3517-b

Trans. from Tabak-Forschung (West Germany) 1953, v. 10.

DESCRIPTORS: *Tobacco, Separation, Detection (Chemical), *Carbohydrates, *Phenols, Polymers, *Alkaloids, Paper chromatography.

Werle, E. and Schievelbein, H.
[TABLES ON THE TOXICOLOGY, PHARMACOLOGY AND CHEMISTRY OF THE CONSTITUENTS OF TOBACCO AND TOBACCO SMOKE, 1].
Order from K-H $30.00 K-H 12057-c

Trans. of Arzneimittel-Forschung (West Germany) 1961, v. 11, p. 1011-1016.

DESCRIPTORS: *Tobacco, *Smokes, Cigarettes, Toxicity, Pharmacology, Chemical analysis.

Werle, E. and Schievelbein, H.
[TABLES ON THE TOXICOLOGY, PHARMACOLOGY AND CHEMISTRY OF THE CONSTITUENTS OF TOBACCO AND TOBACCO SMOKE, 2]. [1962] 42p.
Order from K-H $52.50 K-H 12057-d

Trans. of Arzneimittel-Forschung (West Germany) 1961, v. 11, p. [1149]-1157.

DESCRIPTORS: *Tobacco, *Smokes, Cigarettes, Toxicity, Pharmacology, Chemical analysis.

Yamazaki, M. and Kataoka, S.
SOLVENT EXTRACTION TITRATION METHOD FOR THE DETERMINATION OF NICOTINE AND NORNICOTINE IN TOBACCO. [1962] 13p.
Order from K-H $16.25 K-H 12002-h

Trans. of [Nihon Senbai Kosha Chuo Kenkyusho Kenkyu Hokoku] (Japan) 1962, no. 104, p. 71-75.

DESCRIPTORS: *Tobacco, Separation, *Nicotine, *Titration, Determination.

Inorganic Chemistry

Arguzov, B. A., Vinokurova, G. M., and Perfil'eva, I. A.
SYNTHESIS OF SOME BIFUNCTIONAL COMPOUNDS CONTAINING PHOSPHORUS. [1962] 7p.
Order from ATS $9.85 ATS-98P63R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 272-278.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphorus compounds, Synthesis.

Ruff, O[tto] and Bretschneider, O.
THE COMPOSITION AND THE HEATS OF FORMATION OF THE CARBON FLUORIDE MIXTURES OBTAINED FROM NORITE AND FROM SILICON CARBIDE (HEATS OF FORMATION OF CARBON TETRAFLUORIDE AND SILICON CARBIDE). [1962] 3p. 1 ref.
Order from SLA $1.10 62-16484

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (Germany) 1934, v. 217 [no. 1] p. 19-21.

DESCRIPTORS: *Carbon compounds, *Fluorides, *Silicon compounds, *Carbides, *Heat of formation.

Ruff, O[tto] and Stauber, K[urt].
NITROSYL FLUORIDE. [1962] 11p. (figs. omitted) 14 refs.
Order from SLA $1.60 62-16483

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (Germany) 1905, v. 47, p. 190-202.

DESCRIPTORS: *Nitrogen compounds, *Oxyfluorides, Physical properties, Chemical properties.

Ruff, O[tto], Bretschneider, O., and Ebert, F.
THE REACTION PRODUCTS OF THE VARIOUS FORMS OF CARBON WITH FLUORINE. II. CARBON MONOFLUORIDE [EXCERPTS]. [1962] 4p.
Order from SLA $1.10 62-16475

Partial trans. (p. 2, 7, and 10) of Z[eitschrift für] Anorg[anische] Chem[ie] (Germany) 1934, v. 217, p. 1-19.

DESCRIPTORS: *Carbon compounds, *Fluorides, Graphite, Chemical reactions.

Serowy, F.
HYDROCHLORIC ACID SYSTEMS OF POTASSIUM, SODIUM AND MAGNESIUM CHLORIDES. [1962] 16p.
Order from ATS $18.40 ATS-19P64R

Trans. of Vses[oyuznyi] Nauchn[o]-Issled[ovatel'skii] Inst[itut] Galurgii. Tr[udy] (USSR) 1959, v. 36, p. 136-159.

DESCRIPTORS: *Hydrochloric acid, *Potassium compounds, *Sodium compounds, *Magnesium compounds, Chlorides.

Organic Chemistry

HETEROBLOCK COPOLYMERS AND A PROCEDURE FOR THEIR PREPARATION. [1962] 8p.
Order from ATS $14.75 ATS-24P61I

Trans. of Italian patent 594,018, by Montecatini Soc[ieta] Gen[erale] per l'Industria Mineraria e Chimica [1958].

DESCRIPTORS: Polymerization, *Polymers, Preparation.

ORGANIC CHEMICAL INDUSTRY, 1940, VOL. 7, NO. 9 [TABLE OF CONTENTS AND SELECTED ABSTRACTS IN RELATION WITH PETROLEUM RESEARCH]. [1961] [4]p.
Order from OTS or SLA $1.10 61-20801

Abstract trans. of Promyshlennost' Organicheskoi Khimii (USSR) 1940, v. 7, no. 9, p. 486-492, 517-520.

DESCRIPTORS: *Petroleum, *Organic solvents, Adsorption, Activated carbon, *Pentyl radicals, *Phenols, Synthesis.

Contents:
Methods and conditions employed in recovering solvents, by R. M. Zamekhovskii
Synthesis of amylphenol, by M. A. Belopol'skii and V. V. Tishchenko.

POLYORGANOSILOXANES. 26 Nov 62 [18]p. 9 refs. JPRS: 16345
Order from OTS or SLA $1.60 63-13319

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1962, v. 4, no. 2, p. 216-220 and 256-260.

DESCRIPTORS: *Silicones, Organic compounds, Hydrolysis, *Titanium, Chlorides, *Polymerization, *Metalorganic compounds, *Tin, Polymers, *Acetyl radicals, *Acetonate, Alkyl radicals, Silanes.

Contents:
Polyorganotitanosiloxanes. II. The cohydrolysis reaction of bis-(acetylacetonate) dichlorotitanium with alkyl (aryl) trichlorosilanes, by K. A. Andrianov and others
Polytinorganosiloxanes, by E. Z. Asnovich and K. A. Andrianov.

Abdurasuleva, A. R. and Achilova, S.
CONDENSATION OF PHENOL WITH BORNEOL. Pt. 6 of Cycloalkylation of Phenols and their Ethers (Esters). [1962] 3p.
Order from ATS $5.00 ATS-60P62R

Trans. of #Zn[urnal] Obshch[ei] Khim[ii] (USSR) 1962, v. 32, no. 3, p. 707-708.

DESCRIPTORS: *Phenols, Esters, Condensation, Alkyl radicals, *Alcohols.

Arbuzov, B. A.
TRENDS IN THE DEVELOPMENT OF THE CHEMISTRY OF ORGANOPHOSPHORUS COMPOUNDS. [1962] 20p.
Order from ATS $27.50 ATS-70P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 5-23.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphorus compounds, Organic compounds, Chemistry.

Asai, H.
CONCENTRATED CYCLOHEXANONE SOLUTION OF POLY (VINYL CHLORIDE). Pt. 1 of Properties of Concentrated Solutions of High Polymers. [1962] 8p.
Order from ATS $11.00 ATS-56P64J

Trans. of Kobunshi Kagaku (Japan) 1962, v. 19, no. 201, p. 19-24.

DESCRIPTORS: *Polymers, Solutions, *Cyclohexanones, *Vinyl chlorides, Chemical properties, Chlorides, Vinyl radicals.

Bartos, O.
RHEOLOGICAL PROPERTIES OF MELTS OF HIGH-PRESSURE AND LOW-PRESSURE POLYETHYLENE AND POLYPROPYLENE. [1962] 10p.
Order from ATS $15.50 ATS-69P63C

Trans. of Chem[icky] Prumysl (Czechoslovakia) 1962, v. 12(37) no. 2, p. 97-102.

DESCRIPTORS: *Polymers, *Ethylenes, *Propenes, Pressure, Melting, Mechanical properties, Plastic flow, Deformation.

Bazant, Vladimir, Chvalovsky, Vaclav, and Rathousky, Jiri.
SILICONES: ORGANOSILICON COMPOUNDS, THEIR PREPARATION, PROPERTIES AND USE. Aug 60 [537]p 2276 refs. MCL-186/V; NP-tr-518.
Order from OTS or SLA $26.00 62-33675

Trans. of mono. Silikony Organokremicite Slouceniny, Jejich Priprava, Vlastnosti a Pouziti, Prague, 1954.

DESCRIPTORS: *Silicon compounds, *Silicones, Classification, Preparation, Physical properties, Chemical properties, Polymers, Impregnation, Silicon coatings, Lubricants, Silicone resins, Rubber, Varnishes, Electric insulation

This book is a treatise on organic compounds of silicon, their nomenclature, and methods of their preparation on the laboratory and industrial scales. It describes, further, the chemical properties and reactions of silicon and its compounds, the analytical methods and the physical chemical research in organosilicon chemistry, the main types of organosilicon polymers and the method of their preparation. Included are the practical uses of organosilicon monomers and polymers as impregnating agents, silicone fluids, lubricants, electroinsulating and protective lacquers, molding resins, and silicone rubber. (Author)

Blagonravova, A. A. and others.
PREPARATION OF GRAFT COPOLYMERS BASED ON CELLULOSE ESTERS AND ISOCYANATES. 14 Nov 62, 1750 words.
Order from TTIS TTIS 4019

Trans. of Lakokrasochnye Mat[erialy i Ikh Primenenie] (USSR) 1962, no. 2, p. 4-7.

DESCRIPTORS: *Cellulose esters, *Isocyanates, Polymers, Preparation, Copolymerization.

Braude, G. E., Leites, I. L., and Dedova, I. V.
THE SOLUBILITY OF ACETYLENE, CARBON DIOXIDE AND HIGHER ACETYLENIC HYDROCARBONS IN THE DIMETHYLFORMAMIDE-WATER SYSTEM. [1962] 7p.
Order from ATS $8.25 ATS-02P65R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 4, p. 10-13.

DESCRIPTORS: *Acetylenes, *Carbon dioxide, Hydrocarbons, Solubility, Methyl radicals, *Formamides, Water.

Eidus, Ya. T.
THE CATALYTIC REACTIONS OF HYDRO-POLYMERIZATION OF OLEFINS AND HYDROCONDENSATION OF OLEFINS WITH CARBON MONOXIDE. July 62 [6]p. 25 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of #Akad[emiya] Nauk SSSR. Otdel[enie] Khim[icheskikh] Nauk. Izvest[iya] 1961, no. 7, p. 1336-[1342].
Another trans. is available from ATS $11.80 as ATS-91N56R [1961] 8p.

DESCRIPTORS: *Ethylenes, *Carbon compounds, *Monoxides, Chemical reactions, Polymerization, Condensation, Catalysts.

Gault, M. H.
INVESTIGATION OF ACYCLIC α-KETODIACIDIC ACIDS: -α-KETOADIPIC ACID. [1962] 9p.
Order from K-H $11.25 K-H 6196-c

Trans. of Soc[iété] Chim[ique de France]. Bull[etin] 1912 [ser. 4] v. 11, p. 382-388.

DESCRIPTORS: *Aliphatic compounds, *Acids, *Adipic acid.

Godovikov, N. N.
REPLACEMENT OF THE P=O GROUP BY P=S ORGANOPHOSPHORUS COMPOUNDS. [1962] 3p.
Order from ATS $4.25 ATS-86P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 130-132.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphorus compounds, Organic compounds, Chemical bonds, Phosphorus, Oxygen, Sulfur.

Grishin, A. P. and Tilyupo, G. A.
SOLUBILITY OF PARAFFIN IN ALCOHOLS. [1962] 6p.
Order from ATS $9.25 ATS-01P65R

Trans. of Izv[estiya] Vysshikh Ucheb[nykh] Zavadenii. Neft' i Gaz (USSR) 1961, v. 4, no. 11, p. 53-58.

DESCRIPTORS: Solubility, *Alkanes, *Alcohols.

Hashizume, K.
SYNTHESIS OF 2,5-DIANILINOTEREPHTHALIC ACID. Pt. 2 of Studies on the Organic Pigments of Quinacridon Series. [1962] 8p.
Order from ATS $11.00 ATS-69P64J

Trans. of Yuki Gosei Kagaku Kyokai Shi (Japan) 1962, v. 20, no. 3, p. 248-251.

DESCRIPTORS: *Pigments, Synthesis, Aniline derivatives, *Phthalic acids.

Inami, A. and Morimoto, K.
PHOTOHARDENING REACTION OF POLYVINYL CINNAMATE. [1962] 2p.
Order from ATS $4.00 ATS-92P62J

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65, no. 2, p. 293.

DESCRIPTORS: Polymers, *Vinyl radicals, Hardening, Chemical reactions.

Kabachnik, M. I. and Medved', T. Ya.
A NEW METHOD OF SYNTHESIS OF α-AMINOPHOSPHONIC ACIDS [Novyi Metod Sinteza α-aminofosfinovykh Kislot]. [1962] 4p.
Order from ATS $6.50 ATS-73P64R

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1952, v. 83, no. 5, p. 689-692.
Another trans. is available from SLA as RT-3763.

DESCRIPTORS: *Amino acids, *Phosphonic acids, Synthesis.

Karrer, P. and Kebrle, J.
ON THE CONSTITUTION OF SOME UNSATURATED COMPOUNDS PREVIOUSLY PREPARED FROM [β-IONONE]. [1962] 6p.
Order from K-H $7.50 K-H 5226-c

Trans. of Helvetica Chimica Acta (Switzerland) 1952, v. 35, p. 2570-2573.

DESCRIPTORS: Chemical analysis, *Ketones, *Terpenes, Camphanes.

Karrer, P., Geiger, A. and others.
OPTICALLY ACTIVE PHYTOL [PT. I]. [1962] 12p.
Order from K-H $15.00 K-H 5629-e

Trans. of Helvetica Chimica Acta (Switzerland) 1943, v. 26, p. 1741-1750.

DESCRIPTORS: *Alcohols, Decomposition, *Phytol, Stereochemistry, Optics.

Karrer, P., Simon, H., and Zbinden, E.
OPTICALLY ACTIVE PHYTOL [PT.] II. [1962] 15p.
Order from K-H $18.75 K-H 5562-b

Trans. of Helvetica Chimica Acta (Switzerland) 1944, v. 27, p. 313-316.

DESCRIPTORS: *Alcohols, Decomposition, *Phytol, Stereochemistry, Optics.

Kitahara, M., Mitsui, T., and Hirayama, T.
OXIDATION BY HYDROGEN PEROXIDE AND SELENIUM DIOXIDE. Pt. 1 of Synthesis of a, β-Unsaturated Acids and their Esters by the Oxidation of a, β-Unsaturated Aldehydes. [1962] 14p.
Order from ATS $18.50 ATS-78P64J

Trans. of Rikagaku Kenkyujo Hokoku (Japan) 1962, v. 38, no. 1, p. 81-89.

DESCRIPTORS: *Organic acids, *Esters, Synthesis, *Aldehydes, *Hydrogen compounds, *Peroxides, *Selenium compounds, *Dioxides, Oxidation.

Kuznetsov, E. V., Valetdinov, R. K., and Bakhitov, M. I.
SUBSTITUTED ORGANOPHOSPHORUS COMPOUNDS AS MONOMERS FOR HIGH POLYMERS. [1962] 11p.
Order from ATS $12.95 ATS-01P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 296-304.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: Polymers, Substitution reactions, *Phosphorus compounds, Organic compounds.

Kuznetsov, E. V., Roitburd, Ts. Ya., and Valetdinov, R. K.
SYNTHESES BASED ON PHOSPHINE. [1962] 5p.
Order from ATS $7.50 ATS-05P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, Tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 329-332.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: Synthesis, *Phosphorus compounds, *Hydrides.

Lagidze, R. M. and Iremadze, N. K.
ALKYLATION OF BENZENE WITH DISECONDARY ν-ACETYLENIC GLYCOLS IN THE PRESENCE OF ANHYDROUS $AlCl_3$. [1962] 7p.
Order from ATS $10.35 ATS-82P64R

Trans. of Akad[emiya] Nauk Gruz[inskoi] SSR [Tiflis]. Soobshch[eniya] 1962, v. 28, no. 4, p. 409-416.

DESCRIPTORS: *Benzenes, Alkyl radicals, *Glycols, Catalysts, *Aluminum compounds, *Chlorides, Acetylenes.

Larin, N. A., Matveeva, E. N., and Kazhutkina, L. V.
SYNTHESIS OF SOME 2-HYDROXY-4-ALKOXYBENZOPHENONES, PT. 2. [1962] 3p.
Order from ATS $4.00 ATS-55P62R

Trans. of #Zh[urnal] Obshch[ei] Khim[ii] (USSR) 1962, v. 32, no. 2, p. 367-369.

DESCRIPTORS: *Alkoxy radicals, *Benzophenones, Synthesis, Hydroxides.

Lutsenko, I. F. and Kirilov, M.
REACTION OF PHOSPHORUS PENTACHLORIDE WITH ENOL ACETATES. [1962] 5p.
Order from ATS $8.25 ATS-37P65R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 237-241.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphorus compounds, *Chlorides, Alcohols, *Acetates, Chemical reactions.

Malinovskii, M. S. and Alekseev, V. V.
REACTIONS OF ALKYL PHOSPHITES AND ESTERS OF HYDROXYMETHYLPHOSPHONIC ACID WITH DI-ALKYTHIOCARBAMYL CHLORIDES AND ARYL ISO-THIOCYANATES. [1962] 8p.
Order from ATS $9.10 ATS-89P64R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 136-143.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Alkyl radicals, *Phosphites, Esters, Methyl radicals, *Phosphonic acids, Carbamyl radicals, Chlorides, *Thiocyanates, Chemical reactions.

Minsker, K. S., Kronman, A. G. and others.
STEREOSPECIFIC HOMOGENEOUS POLYMERIZATION OF VINYL CHLORIDE. [1962] 7p.
Order from ATS $9.75 ATS-29P63R

Trans. of Vysokomolek[ulyarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 3, p. 383-388.

DESCRIPTORS: *Stereochemistry, *Vinyl chlorides, *Polymerization, Chlorides, Vinyl radicals.

Mironov, V. A., Sobolev, E. V., and Elizarova, A. N.
MONODEUTERIOCYCLOPENTADIENE. [1962] 6p.
Order from ATS $9.75 ATS-16P63R

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1962, v. 143, no. 5, p. 1112-1115.

DESCRIPTORS: *Deuterated compounds, *Pentadienes, *Cyclopentadiene.

Murai, K., Akazome, G., and Murakami, Y.
STUDIES ON THE FORMATION OF PERACETIC ACID. Paper no. 6 on Study of Epoxy Fatty-Acid Esters.
[1962] [13]p. (foreign text included) 4 refs.
Order from SLA $1.60 62-14374

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 7, p. 1233-1235.

DESCRIPTORS: *Epoxides, *Fatty acid esters, *Acetic acids, Synthesis, Chemical equilibrium, Catalysts.

Some studies are made on the synthesis of peracetic acid from hydrogen peroxide and acetic acid. The equilibrium constant for peracetic acid formation at 25-42°C. is found to be K = 3.26. The equilibrium constant for the reverse reaction is in close agreement. The apparent activation energy of 11.7 k cal/mole is obtained for peracetic acid formation in presence of sulfuric acid as a catalyst. When sulfuric and hydrochloric acids are used as catalysts, the calculated rate constants are related to their concentration. However, if phosphoric acid is used this relation is not found. (Author)

Paushkin, Ya. M., Yuzvyak, A. G., and Rubinshtein, A. I.
SYNTHESIS OF DIMETHYLCYCLOHEXADIENE AND VINYLCYCLOHEXENE BY THE DIMERIZATION OF BUTADIENE. [1962] 7p.
Order from ATS $7.00 ATS-83P64R

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1962, v. 144, no. 3, p. 581-584.

DESCRIPTORS: *Diene synthesis, *Methyl radicals, *Cyclohexadienes, *Vinyl radicals, *Cyclohexenes, Synthesis, *Butadienes, *Hexenes.

Petrov, K. A., Nifant'ev, E. E., and Sopikova, I. I.
APPLICATION OF THE ARBUZOV REARRANGEMENT TO POLYPHOSPHONATE SYNTHESIS. [1962] 5p.
Order from ATS $6.00 ATS-71P64R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 292-295.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphonic acids, *Esters, Synthesis.

Prochazka, J.
A METHOD FOR THE PRODUCTION OF POLY-METHYLENETETRAZOLES. [1962] 2p.
Order from ATS $3.25 ATS-11P65C

Trans. of Czechoslovakian patent 92,456, opened for pub. inspection 15 Feb 59, issued 15 Oct 59.

DESCRIPTORS: Production, *Methyl radicals, *Azoles.

Shuikin, N. I., Erivanskaya, L. A., and Yang, A. -H.
CATALYTIC DEHYDROCYCLIZATION OF 1-n-ALKYLNAPHTHALENES. [1962] 6p.
Order from ATS $8.00 ATS-93P62R

Trans. of #Zh[urnal] Obshch[ei] Khim[ii] (USSR) 1962, v. 32, no. 3, p. 823-827.

DESCRIPTORS: Alkyl radicals, *Naphthalenes, Dehydrogenation, Catalysis.

Soborovskii, L. Z., Gololobov, Yu. G., and Fedotova, V. V.
REACTION OF ESTERS OF PHOSPHOROUS ACID WITH TRICHLOROACETYL CHLORIDE. [1962] 5p.
Order from ATS $6.95 ATS-87P64R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 232-236.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphorus acids, Esters, Chlorine compounds, Acetyl radicals, *Chlorides, Chemical reactions.

Strepikheev, A. A., Skuratov, S. M. and others.
CONCERNING THE STRESSES OF LACTAMS. [1962] 7p. [formulae in table 1 omitted] 6 refs.
Order from OTS or SLA $1.10 62-16632

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 102, no. 1 [p. 105-108].
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-15311 [1959] 6p.

DESCRIPTORS: *Lactams, *Polymerization, *Stresses, Combustion, Temperature.

For abstract see Technical Translations 2: 185, 1959.

Stupel, H.
HYGROSCOPICITY, HARDENING, AND CAKING OF SYNTHETIC DETERGENTS. [1962] 7p.
Order from ATS $9.00 ATS-48P64G

Trans. of Seifen-Öle-Fette-Wachse (West Germany) 1954, v. 80, no. 8, p. 170-172.

DESCRIPTORS: *Dehydration, *Hardening, *Detergents.

Stupel, H.
HYGROSCOPICITY, HARDENING, AND CAKING OF SYNTHETIC DETERGENTS. [1962] 5p.
Order from ATS $7.00 ATS-49P64G

Trans. of Seifen-Öle-Fette-Wachse (West Germany) 1954, v. 80, no. 9, p. 225-227.

DESCRIPTORS: *Dehydration, *Hardening, *Detergents.

See also: ATS-48P64G

Tsvetkov, V. N.
SHAPE ASYMMETRY AND OPTICAL ANISOTROPY OF SHORT MOLECULAR CHAINS. [1962] 8p.
Order from ATS $12.00 ATS-41P64R

Trans. of Vysokomolekul[yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 6, p. 894-900.

DESCRIPTORS: *Stereochemistry, Molecular structure, Optics.

Vargaftik, M. N., Moiseev, I. I. and others.
THE FORMATION OF ALLYL ESTERS IN THE REACTION OF HIGHER OLEFINS WITH PALLADIUM CHLORIDE IN SOLUTIONS OF ANHYDROUS CARBOXYLIC ACIDS. [1962] 2p.
Order from ATS $2.00 ATS-81P64R

Trans. of #Akad[emiya] Nauk SSSR. Otd[elenie] Khim[icheskikh] Nauk. Izv[estiya] 1962, no. 5, p. 930-931.

DESCRIPTORS: *Allyl radicals, *Esters, Production, Ethylenes, *Palladium compounds, Chlorides, *Carboxylic acids, Chemical reactions.

Vinogradova, V. S. and Polezhaeva, N. A.
DIETHYL 2-CYCLOHEXANONYLPHOSPHONATE AND ITS TAUTOMERISM. [1962] 6p.
Order from ATS $8.85 ATS-85P64R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 99-104.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Stereochemistry, Molecular isomerism, *Cyclohexanones, *Nonyl radicals, *Phosphorus compounds.

Voronkov, M. G. and Ionin, B. I.
THE REACTION OF DIALKYL PHOSPHONATES WITH QUINONES. [1962] 4p.
Order from ATS $5.50 ATS-91P63R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, Tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 203-206.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Alkyl radicals, *Phosphonic acids, Esters, *Quinones, Chemical reactions.

Weber, H.
ON BUTADIENE-OLEFIN MIXED-POLYMERS. 5 Feb 60 [1]p.
Order from SLA $1.10 62-16726

Abstract trans. of unidentified article, n.p., n.d.

DESCRIPTORS: Polymers, *Butadienes, *Ethylenes, Mixtures.

Wende, A. and Joel, D.
SYNTHESIS OF ALKYL-2,3-EPOXYPROPOZYSILANES AND THEIR RESISTANCE TO HYDROLYSIS. Sep 62, 800 words.
Order from TTIS $6.00 TTIS NS 39

Trans. of Plaste und Kautschuk (Germany) 1962, v. 9 [no. 7] p. 343-344.

DESCRIPTORS: *Silanes, Alkyl radicals, Ethyl radicals, Methyl radicals, Butyl radicals, Epoxides, Alkoxy radicals, Synthesis, Hydrolysis, Resistance.

Zal'kind, Yu. S. and Plets, V. M.
SYNTHESIS WITH VINYLACETYLENE. [1961] 3p. 1 ref.
Order from OTS or SLA $1.10 61-18154

Trans. of Zhurnal Obshchei Khimii (USSR) 1934, v. 4, p. 1088-1090.

DESCRIPTORS: *Alcohols, Synthesis, *Vinyl radicals, *Acetylenes, Magnesium compounds, Bromides, Chemical reactions, Hydrocarbons, *Carbinols.

Synthesis of two unsaturated alcohols with.7 and with 10 carbon atoms, respectively, is reported, using vinylacetylenylmagnesium bromide. The double and two one double and one triple bond and the second two double and two triple bonds. Their distillation is accompanied by dehydration to the corresponding hydrocarbons. Rapid polymerization of the compounds obtained was noted. (Author)

Physical Chemistry

ASBESTOS: GENERAL NOTIONS, EXTRACTION, PROCESSING (CONTINUATION). [1962] 20p. 9 refs.
Order from SLA $1.60 62-14860

Trans. of Gummi, Asbest, Kunststoffe (West Germany) 1961, v. 14, no. 9, p. 806, 808, 812 and 814.

DESCRIPTORS: *Asbestos, Iron compounds, Oxides, Magnetite, Paper, Bonding, Synthetic rubber, Specifications, Classification, Processing, Dielectric properties, Insulating materials, Electric insulation, *Asbestos fibers, Solvent extraction.

JOURNAL OF PHYSICAL CHEMISTRY, 1944, VOL. 18, NO. 1/2: [TABLE OF CONTENTS AND SELECTED ABSTRACTS IN THE FIELD OF PETROLEUM LITERATURE]. [1962] 2p. 12 refs.
Order from OTS or SLA $1.10 62-10836

Abstract trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944, v. 18, no. 1/2, p. 1-32.

DESCRIPTORS: *Physical chemistry, *Photochemical reactions, *Abstracts, *Petroleum, Benzenes, Oxidation Polymerization, *Styrenes.

Contents:
Photochemical processes in aromatic compounds, by A. N. Terenin
Oxidation and polymerization of styrene, by S. Medvedev and P. Tseitlin.

JOURNAL OF PHYSICAL CHEMISTRY, 1944, VOL. 18, NO. 3/4: [TABLE OF CONTENTS AND SELECTED ABSTRACTS IN THE FIELD OF PETROLEUM LITERATURE]. [1962] 4p. 3 refs.
Order from OTS or SLA $1.10 62-10833

Abstract trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944, v. 18, no. 3/4, p. 87-101 and 110-130.
##Complete translations are available as follows: p. 87-101 from OTS or ETC $2.00 as 61-17375, MTWL-690, 25p. (in Dutch); p. 110-114 from OTS or SLA $1.60 as 61-28107, 24 Nov 52, 14p. and from OTS $0.50 as 60-41344, JPRS-4017, 9 Sep 60, 9p.

DESCRIPTORS: *Abstracts, *Physical chemistry, *Kinetic theory, *Oxidation, Sulfur compounds, Dioxides, *Combustion, *Oxygen, Mixtures, Monoxides, Explosions, Thermodynamics, *Nitrogen, Pressure, Carbon compounds, Iron compounds, Oxides.

Contents:
##Kinetics of contact oxidation of sulfur dioxide on ferric oxide, by G. K. Boreskov and T. I. Sokolova
##Combustion of mixtures of oxygen with carbon monoxide, by V. N. Kondrat'ev
Mechanism of explosion of combustible mixtures, III, by M. V. Polyakov and others
Thermodynamic properties of nitrogen under pressures of from 1,000 to 6,000 atm, by P. E. Bol'shakov

JOURNAL OF PHYSICAL CHEMISTRY, 1944, VOL. 18, NO. 5/6: [TABLE OF CONTENTS AND SELECTED ABSTRACTS IN THE FIELD OF PETROLEUM LITERATURE]. [1962] 5p. 22 refs.
Order from OTS or SLA $1.10 62-10834

Abstract trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944, v. 18, no. 5/6, p. 207-233, ##253-257 and 260.
##A complete trans. is available from ATS $7.10 as ATS-33K25R, 5p.

DESCRIPTORS: *Abstracts, *Physical chemistry, *Hydroxides, *Flames, *Acetylenes, *Surface tension, Solutions, *Vapor pressure, Solids, *Equations of state, *Gases.

Contents:
Hydroxyl in flames. II. Hydroxyl in the flame of acetylene, by L. I. Avramenko
Surface tension of solutions, by A. A. Zhukovitskii
##Vapor pressure of solid acetylene, by P. Z. Burbo
A new modification of the van der Waals equation suitable for rarified and condensed gases, by S. S. Vasil'ev.

JOURNAL OF PHYSICAL CHEMISTRY, 1944, VOL. 18, NO. 7/8: [TABLE OF CONTENTS AND SELECTED ABSTRACTS IN THE FIELD OF PETROLEUM LITERATURE]. [1962] 3p. 6 refs.
Order from OTS or SLA $1.10 62-10835

Abstract trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944, v. 18, no. 7/8, p. 311-314 and ##321-328.
##A complete trans. is available from OTS or SLA $1.10 as 61-18194 [1961] 8p.

DESCRIPTORS: *Physical chemistry, *Abstracts, *Photochemical reactions, *Halogens, Benzenes, *Catalysis, Decomposition, *Peroxides, *Petroleum.

Contents:
Photochemical decomposition of halogen derivatives of benzene, by O. P. Semenova and G. S. Tsikunov
##Influence of catalytic additions on the decomposition and formation of organic peroxides, by F. I. Berezovskaya and others.

Adel'son, S. V. and Zaitova, A. Ya.
THE OXIDATION OF COKE ON THE SURFACE OF A SPHERICAL ALUMINOSILICATE CATALYST. July 62 [5]p. 9 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[iya] i Tekh[nologiya] Topliv i Masel (USSR) 1962 [v. 7] no. 1, p. 25-[31].
Another trans. is available from ATS $13.25 as ATS-07P61R [1962] 9p.

DESCRIPTORS: *Coke, Oxidation, *Alumina-silica catalysts, Catalysts, Catalysis, Surface properties.

Alexander, P. and Fox, M.
POLYMERIZATION AND DEPOLYMERIZATION BY X RAYS: THE EFFECTS OF PROTECTIVE AGENTS. [1962] 11p. (refs. figs. tables omitted).
Order from SLA $1.60 62-16911

Trans. of Journal de Chimie Physique (France) 1953 [v. 50] no. 6, p. 415-422.

DESCRIPTORS: *Radiochemistry, *X-rays, Radiation effects, *Acrylic acids, *Polymerization, Decomposition, Inhibition, Amines, Sulfides, Indoles, Chemical bonds.

Balandin, A. A. and Patrikeev, V. V.
CARBON DENDRITES IN CATALYTIC DECOMPOSITION OF ALCOHOLS ON METALS. [1962] 3p. 10 refs.
Order from OTS or SLA $1.10 62-16771

Trans. of Akademiya Nauk SSSR. Doklady, 1943, v. 40, no. 4, p. 171-174.

DESCRIPTORS: *Alcohols, Decomposition, Catalysis, Metals, Copper alloys, Nickel alloys, *Carbon.

Bartenev, G. M. and Zakharenko, N. V.
VISCOSITY AND FLOW MECHANISM OF FILLED POLYMERS. [1962] 8p.
Order from ATS $10.75 ATS-49P63R

Trans. of #Kolloidnyi Zh[urnal] (USSR) 1962, v. 24, no. 2, p. 121-127.

DESCRIPTORS: *Polymers, Viscosity, Plastic flow.

Billy, Michel.
SILICON NITRIDE RESEARCH. I. PREPARATION AND THERMOLYSIS OF TRIIMIDODISILANE $Si_2(NH)_3$ [Recherches sur les Nitrures de Silicium. I. Preparation et Thermolyse du Triimidodisilane $Si_2(NH)_3$]. [1962] 47p. 17 refs.
Order from SLA $4.60 62-16584

Trans. of Soc[iété] Chim[ique] de France. Bull[etin] 1961, no. 8/9, p. 1550-1559.

DESCRIPTORS: *Thermochemistry, *Silicon compounds, *Nitrides, *Imides, *Silanes, *Ammonia, Pyrolysis, Hydrolysis, Purification, Chemical bonds.

The tendency toward fixation of the ammonia through silicon bonds dominates the whole thermolysis of the triimidodisilane. The decomposition itself of $Si_2(NH)_3 \rightarrow NH_3 + Si_2N_2$ which leads at 475° to a subnitride of silicon of the silico cyanogen-type, is made "complex" beyond 285° by the secondary ammonolysis reaction $..Si - Si.. + NH_3 \rightarrow ..Si - NH - Si.. + H_2$. The composition of the products formed depends therefore essentially on the conditions under which the ambient ammonia is eliminated. It is shown that the ammonolysis reaction, which is to a large degree intramolecular, cannot be avoided, even if the ammonia is extracted in vacuo. A complex molecule will be obtained in which the groups $..NSi - SiN..$ and $..NSi - NH - SiN..$ coexist. These will finally lead at elevated temperatures to the formation of the nitride Si_3N_4 which crystallizes into α-form. (Author)

Derman, B. M.
STOICHIOMETRIC ANALYSIS OF CHEMICAL REACTIONS IN THE BURNING AND GASIFICATION OF CARBON, tr. by V. Beak. May 61 [12]p. 2 refs.
AERE Trans 868.
Order from OTS or SLA $1.60 62-25400

Trans. of [Akademiya Nauk SSSR]. Institut Goryuchikh Iskopaemykh. Trudy, 1959, v. 11, p. 127-132.

DESCRIPTORS: *Carbon, Chemical reactions, Combustion, Vaporization, *Reaction kinetics.

Dubinin, M. M., Zhukovskaya, E. G. and Murdmaa, K. O.
ADSORPTION OF NITROGEN AND WATER VAPOR ON ZEOLITES OF TYPE X AND THE POTENTIAL THEORY OF ADSORPTION. Pt. 6 of Investigation of Adsorption Properties and Secondary Pore Structure of Adsorbents with a Molecular Sieve Action. [1962] 10p.
Order from ATS $14.50 ATS-22P64R

Trans. of #Akad[emiya] Nauk SSSR. Otd[elenie] Khim[icheskikh] Nauk. Izv[estiya] 1962, no. 6, p. 960-968.

DESCRIPTORS: *Adsorbents, *Organolites, *Nitrogen, *Water vapor, Adsorption, Theory.

Dudina, L. A. and Enikolopyan, N. S.
INITIATION MECHANISM IN THE THERMAL DEGRADATION OF POLYMERS. [1962] 8p.
Order from ATS $9.65 ATS-39P64R

Trans. of Vysokomolekul [yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 6, p. 869-875.

DESCRIPTORS: *Polymers, Pyrolysis, Chemical reactions.

Efimov, E. A. and Erusalimchik, I. G.
INVESTIGATION OF THE SURFACE CONDITION OF ANODICALLY POLARIZED GERMANIUM IN ACID SOLUTIONS. [1962] 8p. 5 refs.
Order from OTS or SLA $1.10 62-16691

Trans. of #Zh[urnal] Fiz[icheskoi] Khimii (USSR) 1962, v. 36, no. 1, p. 98-102.

DESCRIPTORS: *Germanium, Polarization, Anodes, Acids, Solutions, Electrochemistry, Surface properties, *Semiconductors.

The surface condition of anodically polarized germanium in 0.1 N H_2SO_4 was studied by the method of charge curves and capacity measurements. It was concluded that in anodic polarization processes below 0.38 v there is a formation of electrochemically adsorbed oxygen layer. The amount of adsorbed oxygen increases with increased potential and anodic polarization time. Simultaneously, a more stable bond is formed between germanium and oxygen, and an oxide phase appears. At potentials above 0.38 v a monolayer of a certain compound is formed on the germanium surface wherein one atom of oxygen combines with one atom of germanium. This compound has a high resistance and can be reduced cathodically. At potentials exceeding 0.57 v a thicker layer of oxide is formed of the GeO type. The thickness of this layer increases with increased potential and polarization time. This oxide cannot be cathodically reduced completely; the separation potential of hydrogen from such a surface is higher than from pure germanium. (Author)

Flis, I. E.
ENERGETICS OF THE FORMATION OF SO_4^{--} AND HSO_4^- IONS IN AQUEOUS SOLUTIONS AT VARIOUS TEMPERATURES. [1962] 5p.
Order from ATS $5.50 ATS-16P64R

Trans. of #Zh[urnal] Prikl[adnoi] Khim[ii] (USSR) 1961, v. 34, no. 8, p. 1744-1747.

DESCRIPTORS: *Sulfates, *Ions, Temperature, Reaction kinetics.

Flis, I. E., Mishchenko, K. P., and Pakhomova, N. V.
THERMOCHEMISTRY OF THE DISSOCIATION OF SULFURIC AND HYPOCHLOROUS ACIDS IN AQUEOUS SOLUTION [Termokhimiya Dissotsiatsii Sernoi i Khlornovatistoi Kislot v Vodnom Rastvore]. [1962] 11p.
Order from ATS $12.00 ATS-18P64R

Trans. of Zh[urnal] Neorgan[icheskoi] Khim[ii] (USSR) 1958, v. 3, no. 8, p. 1772-1780.

DESCRIPTORS: *Thermochemistry, *Sulfuric acid, *Hypochlorous acid, Dissociation, Solutions.

Grubitsch, H. and Heckel, K.
INVESTIGATION OF SURFACE CHANGES OF PLATINUM ELECTRODES. [1962] [8]p. 2 refs.
Order from SLA $1.10 62-14775
Figs. poor quality; available on loan also

Trans. of Werkstoffe u[nd] Korrosion (West Germany) 1960, v. 11 [no. 5] p. 271-273.

DESCRIPTORS: *Electrochemistry, *Platinum electrodes, Surface properties, Microstructure.

Kazanskii, K. S., Entelis, S. G., and Chirkov, N. M.
THE SOLUBILITY OF GASEOUS ISOBUTYLENE IN WATER. [1962] 6p.
Order from ATS $8.95 ATS-97P64R

Trans. of Zh[urnal] Fiz[icheskoi] Khim[ii] (USSR) 1959, v. 33, no. 6, p. 1409-1413.

DESCRIPTORS: *Butenes, Gases, Solubility, Water

Kazarinov, V. E. and Balashova, N. A.
STUDY OF THE ADSORPTION OF IODINE ON SMOOTH PLATINUM AND ITS DESORPTION BY THE METHOD OF TAGGED ATOMS. [1960] 5p. 7 refs.
Order from OTS $0.50 62-11323

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1960, v. 134, no. 4, p. 864-866.

DESCRIPTORS: *Iodine, Adsorption, *Platinum, Labeled substances, Acids.

Iodine adsorption on smooth platinum from acid and, partially, basic solutions of sodium iodine was studied as a function of its concentration and time, and a study was made of iodine desorption under various conditions. The research was conducted by the tagged atom method using I^{131} and I^{193} isotopes.

Keier, N. P. and Astaf'ev, I. V.
CATALYTIC PROPERTIES OF A POLYMER PREPARED BY DEHYDROCHLORINATION OF POLY (VINYLIDENE CHLORIDE). Pt. 2 of Catalytic Activity of Organic Polymers. [1962] 3p.
Order from ATS $4.50 ATS-27P64R

Trans. of Kinetika i Kataliz (USSR) 1962, v. 3, no. 3, p. 364-365.

DESCRIPTORS: Catalysts, *Polymers, *Vinyl chlorides, *Dienes, *Dehydrogenation, *Chlorination.

Khitrin, L. N., Ravich, M. B., and Kotova, L. L.
THE METHODS AND RESULTS OF AN INVESTIGATION INTO THE KINETIC CHARACTERISTICS OF THE COMBUSTION OF A POWDERED FUEL IN A STREAM. July 62 [5]p. 12 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1962 [v. 5] no. 1, p. 7ff.

DESCRIPTORS: *Fuels, Powders, *Carbon, *Coke, Combustion, Reaction kinetics.

Kir'yanov, V. A.
THE THEORY OF DIFFUSION IN SOLUTIONS OF STRONG ELECTROLYTES (CALCULATION OF THE ASSOCIATION OF IONS) tr. by Bertha P. Klenova. 15 Dec 61, 7p. 5 refs. TVA-3971
Order from OTS or SLA $1.10 62-24463

Trans. of #[Zhurnal Fizicheskoi Khimii] (USSR) 1961, v. 35, p. 2389-2391.

DESCRIPTORS: *Electrochemistry, *Solutions, *Electrolytes, Ions, Diffusion, Mathematical analysis.

The present study deals with the problem of calculating the interaction of ions in the discussion of processes of diffusion in solutions of strong electrolytes under conditions when the interionic reaction must not be neglected. (Author)

Kiselev, A. V., El'tekov, Yu. A., and Semenova, V. N.
ADSORPTION OF THIOPHENE + n-HEPTANE SOLUTIONS ON MOLECULAR SIEVE 5A. [1962] 8p.
Order from ATS $14.85 ATS-28P64R

Trans. of Kinetika i Kataliz (USSR) 1962, v. 3, no. 3, p. 421-426.

DESCRIPTORS: *Thiophenes, *Heptanes, Solutions, *Adsorption, Adsorbents.

Kiselev, A. V.
NEW PROBLEMS IN ADSORPTION RESEARCH. EFFECT OF ADSORBENT NATURE, SURFACE HETEROGENEITY, AND THE INTERACTION OF ADSORBED MOLECULES ON THE ADSORPTION PROPERTIES OF SOLIDS. [1962] 10p.
Order from ATS $13.50 ATS-66P63R

Trans. of #Kolloidn[yi] Zh[urnal] (USSR) 1962, v. 24, no. 2, p. 185-194.

DESCRIPTORS: *Solids, *Adsorption, Molecules, Adsorbents, Surface properties.

Koida, N. U. and Bukhbinder, M. A.
HEIGHT AND RATE OF CAPILLARY RISE IN A POROUS MEDIUM. [1962] 5p.
Order from ATS $6.50 ATS-24P64R

Trans. of #Zh[urnal] Fiz[icheskoi] Khim[ii] (USSR) 1962, v. 36, no. 6, p. 1205-1209.

DESCRIPTORS: *Porous materials, *Capillaries.

Korshak, V. V. and Smirnov, R. N.
CHANGE IN THE AGGREGATE STATE OF POLYMERS ON MERCURATION. [1962] 5p.
Order from ATS $8.25 ATS-40P64R

Trans. of Vysokomolekul[yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 6, p. 889-893.

DESCRIPTORS: *Polymers, Physical properties, *Mercury.

Lebedev, S. V., Khokhlovkin, M. A. and others.
KINETICS OF THE PROCESS OF THERMAL POLYMERIZATION OF BUTADIENE. [1961] 11p. 16 refs.
Order from OTS or SLA $1.60 61-18074

Trans. of Zhurnal Fizicheskoi Khimii (USSR) [1935] v. 6, p. 130ff (also pub. in mono. Lebedev, S. V., Life and Works, Leningrad, 1938, p. 647-662).

DESCRIPTORS: *Butadienes, Polymerization, Reaction kinetics, Temperature, Velocity, Oxygen

Thermal polymerization of butadiene within the temperature interval of 110-200° was investigated, and reaction velocity curves obtained for each temperature. It was established that the order of the reaction changes with change of the temperature of the experiment. The average order of the reaction determined according to van't Hoff is approximately 1.5. The accelerating effect of oxygen on the process of thermal polymerization of butadiene was established; the effect of oxygen consists in increased formation of the polymer. The homogeneous character of the reaction in the liquid phase was established. (Author)

Losev, S. A.
EQUILIBRIUM STATE OF GAS BEHIND A SHOCK WAVE IN OXYGEN, NITROGEN AND THEIR MIXTURES WITH XENON, tr. by Astrid Werner. May 62 [3]p. 4 refs.
Order from ARS in Its journal, v. 32, no. 5, $3.00

Trans. of Moscow U. Vestnik. [Seriya 3: Fizika, Astronomiya] (USSR) 1960 [v. 15] no. 5, p. 47-52. An unedited rough draft trans. is available from OTS or SLA $1.10 as 62-13062, MCL-1347, 23 Oct 61 [9]p.

DESCRIPTORS: Gases, *Oxygen, *Nitrogen, *Xenon, *Shock waves, Dissociation, Thermodynamics, Chemical equilibrium.

For abstract see Technical Translations 7: 404, 1962.

Maidanovskaya, L. G., Filatova, E. F., and Kalinova, M. V.
ADSORPTION OF ELECTROLYTES ON ZIRCONIUM OXIDE AFTER ACTIVATED ADSORPTION OF HYDROGEN ON IT. [1962] 5p.
Order from ATS $8.00 ATS-97P61R

Trans. of Tomsk U. Uch[enye] Zap[iski] (USSR) 1959, v. 29, p. 37-41.

DESCRIPTORS: *Zirconium compounds, Oxides, *Electrolytes, *Hydrogen, Adsorption.

Maitak, G. P. and Gratsyanskii, N. N.
STUDY OF PASSIVITY OF STAINLESS STEEL.
5 Aug 52, 6p. (figs. tables omitted) 5 refs.
Order from OTS or SLA $1.10 62-18443

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1951, v. 24, no. 5, p. 545-547.

DESCRIPTORS: *Stainless steel, *Passivity, Corrosion inhibition, Scale, Solutions, Electrodes, Electrochemistry.

Malmquist, Lars.
SORPTION OF WATER VAPOR BY WOOD FROM THE STANDPOINT OF A NEW SORPTION THEORY (Die Wasserdampfsorption des Holzes vom Standpunkt einer Neuen Sorptionstheorie). [1962] [25]p. (figs. formulae omitted) 5 refs.
Order from SLA $2.60 62-16630

Trans. of Holz als Roh- und Werkstoff (West Germany) 1959, v. 17 [no. 5] p. 171-178.

DESCRIPTORS: *Wood, *Water vapor, Theory, Hysteresis, Vapor pressure, *Sorption.

A detailed application of the space theory of sorption on sorption data of wood has shown that the general isotherm of this theory describes the data within experimental error. The existence of compound sorption with liquid sorption in a part of the structure and soft sorption in another part has given strong evidence. The theory has yielded a quantitative description and a physical interpretation of sorption hysteresis. The hysteresis structure of wood, as demanded from the theory, is discussed as to its consequences regarding wood research. (Author)

Mar'yasin, I. L. and Tesner, P. A.
KINETICS OF CARBON SURFACE GROWTH IN THE THERMAL DECOMPOSITION OF METHANE WITHIN THE 1,400-1,700° C TEMPERATURE RANGE.
July 62 [4]p. 12 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of A[kademiya] N[auk] SSSR. Doklady, v. 140, no. 5, p. 1121-[1124].
Another trans. is available from ATS $8.00 as ATS-73P59R [1962] 5p.

DESCRIPTORS: *Methanes, *Pyrolysis, Decomposition, Temperature, *Carbon, Surfaces, Growth, Kinetic theory.

Meklakov, A. I., Pimenov, G. G., and Sagitov, R. Ya.
INVESTIGATION OF POLYMERS SUBJECTED TO UNIAXIAL STRETCHING AT HIGH DEFORMATION RATES. [1962] 6p.
Order from ATS $9.25 ATS-73P62R

Trans. of Vysokomolekul[yarnye] Soedineniya] (USSR) 1961, v. 3, no. 9, p. 1410-1414.

DESCRIPTORS: *Polymers, Tensile properties, *Deformation, Plastic flow, Viscosity.

Mikhailov, V. A. and Drakin, S. I.
MECHANISM OF THE SOLVATION OF IONS. [1962] 10p.
Order from ATS $14.85 ATS-59P64R

Trans. of Akad[emiya] Nauk SSSR. Sibirsk[oe] Otd[elenie]. Izv[estiya] 1960, no. 6, p. 44-52.

DESCRIPTORS: *Ions, Solubility, Chemical reactions.

Miyata, Akira and Koyama, Masashi.
ELECTRIC CHARACTERISTICS OF THE TITANIUM ANODE FILM. Rept. no. 1 of a Study on the Metallic Titanium Anode Oxidation. [1962] [21]p. (foreign text included).
Order from SLA $2.60 62-16842

Trans. of Rikagaku Kenkyujo Hokoku (Japan) [1961] v. 37, no. 5, p. 290-296.

DESCRIPTORS: *Electrochemistry, *Metal films, *Titanium, Oxidation, Electrical properties, Dielectrics, Anodes (Electrolytic cell), *Electrolytic capacitors.

A new method is proposed whereby the formation of metallic titanium is carried out in a non-aqueous solution. Paste type and solid type electrolytic condensers were made and their various electrical properties were examined. The oxidized titanium film which is obtained by a non-aqueous solution formation is a fine dielectric, possessing the properties necessary for an electrolytic condenser. Despite the fact that there were slight defects in the selection of materials as well as in the processes involved because the preparation of a paste type titanium condenser was the first undertaking, it was confirmed that its electrical properties are by no means inferior to those of the tantalum electrolytic condenser.

Müller, F., Heuer, E., and Witnes, O.
STUDY OF CONDITIONS OF DEPOSITION IN THE PRODUCTION OF ELECTROLYTIC IRON SHEET.
28 Mar 51, 9p. (figs. tables refs. omitted).
Order from SLA $1.10 62-18418

Trans. of Zeitschrift für Elektrochemie (Germany) 1941, v. 47, no. 2, p. 135-143.

DESCRIPTORS: *Sheets, *Iron, Electrodeposition, Electrochemistry.

Nikol'skii, B. P., Trofimov, A. M., and Vysokoostrovskaya, N. B.
REACTION OF RADIUM AND BARIUM WITH NITRILOTRIACETIC ACID IN AQUEOUS SOLUTION, tr. by Jean Stuart. July 61 [19]p. 9 refs. AWRE/Trans/17; [DSIR] NLL M.4353.
Order from OTS or SLA $1.60 62-25561

Trans. of Radiokhimiya (USSR) 1959, v. 1, no. 2, p. 155-161.

DESCRIPTORS: *Complex compounds, *Radium, *Barium, Nitrilo redicals, *Acetic acids, Solutions, Reaction kinetics, Sorption.

In examining the process of complex-formation by radium and barium in solutions of nitrilotriacetic acid in the range from pH 4 to pH 8 by the ion exchange method, using micro-concentrations of the isotopes Ba-140 and Ra-226, it was established that in solutions of nitrilotriacetic acid with pH values from 6 to 8 anionic complexes are formed with the composition $(RaX)^-$, where X is an anion of NTAA. The composition of the complex anions of barium established by Schwarzenbach was confirmed. Formation of these complex ions in appreciable quantities (> 5%) begins when the concentration of the ligand (X^{3-} ions) is about 4×10^{-8} mole/litre; with a concentration of 2×10^{-5} mole/litre the free barium ions in the solution do not exceed 5% of the total concentration of the element. The corresponding concentrations of ligand for radium are 10^{-7} and 5×10^{-5} mole/litre. The values of the instability constants are $pK_{Ra} = 5.75$, $pK_{Ba} = 6.17$, showing the stability of the radium complex to be somewhat lower than that of the corresponding barium complex. (Author)

Ogorodnikov, S. K., Kogan, V. B., and Nemtsov, M. S.
LIQUID-VAPOR EQUILIBRIUM IN BINARY SYSTEMS, FORMED BY HYDROCARBONS WITH ACETONE. [1962] 12p. 20 refs.
Order from OTS or SLA $1.60 62-14823

Trans. of #Zhur[nal] Priklad[noi] Khim[ii] (USSR) 1961, v. 34 [no. 2] p. 323-331.

DESCRIPTORS: *Hydrocarbons, Pentanes, Hexanes, Ethylenes, Pentadienes, Heptanes, *Acetones, Separation, *Phase studies, Liquids, Vapors.

The earlier conclusion, that the degree of nonideality in the systems, formed by polar substance with isomers or close homologs of one class of hydrocarbons, is identical was confirmed during experimental studying of liquid-vapor equilibrium in binary systems, composed of acetone and the hydrocarbons: isopentane, n-hexane, n-heptane, methylethylethylene (unsymmetrical), trimethylethylene, n-hexene-1, isoprene and piperylenes (50% mixture of cis- and trans-isomers). It follows from this first that, the equilibrium in system hydrocarbon/ /polar substance can be calculated on the basis of data of equilibrium in systems, formed by this substance with isomers or close homologs of the given hydrocarbon; secondly, application of polar substances as separating agents for azeotropic and extractive fractionation of mixtures of isomers and close homologs of the aliphatic hydrocarbons of the same class cannot practically improve the separation, as compared with the usual fractionation. (Author)

Ogorodnikov, S. K., Kogan, V. B., and Nemtsov, M. S.
LIQUID VAPOR EQUILIBRIUM IN SYSTEMS OF HYDROCARBONS WITH METHYL FORMATE. [1962] 6p. 9 refs.
Order from OTS or SLA $1.10 62-14825

Trans. of #Zhur[nal] Priklad[noi] Khim[ii] (USSR) 1961, v. 34 [no. 3] p. 581-584.

DESCRIPTORS: *Hydrocarbons, Hexanes, Methanes, Pentadienes, *Methyl radicals, *Formates, Separation, Phase studies, Liquids, Vapors.

The former conclusion, that addition of polar substances to mixtures of hydrocarbons is provoking a variation of the latters relative volatility in the raw paraffins>olefins>dienes was confirmed during an experimental study on liquid-vapor equilibrium of binary systems, formed by methyl formate and n-hexane, trimethylene and isoprene. Relative volatility coefficients of hydrocarbons mixtures in the presence of methyl formate were calculated with the data on equilibrium in binary systems. (Author)

Zaidel, A. N.
THE LUMINESCENCE OF SOLUTIONS OF SALTS OF THE RARE EARTHS [tr. by Cyrus Feldman]. [1962] 9p. (figs. refs. omitted) 6 refs.
Order from OTS or SLA $1.10 AEC-tr-5112

Trans. of [Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya] 1945, v. 9, p. 329-334.

DESCRIPTORS: *Rare earth elements, Salts, Solutions, *Luminescence, Atomic orbitals, *Atomic energy levels, Quantum mechanics, Spectrographic analysis.

Ozerov, R. P.
TUNGSTEN AND VANADIUM BRONZES. [1962] 5p. 13 refs.
Order from OTS or SLA $1.10 AEC-tr-5131

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1954, v. 99 [no. 1] p. 93-95.
Another trans. is available from OTS or SLA $1.10 as 62-16141 [1962] 6p.

DESCRIPTORS: *Bronze, *Tungsten compounds, *Vanadium compounds, Valence, Chemical analysis.

Polotnyuk, O. Ya.
THE KINETICS OF CHEMICAL REACTIONS IN A FLUIDIZED CATALYST BED. [1962] 9p.
Order from ATS $13.65 ATS-55P60R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961. no. 11, [p. 763-766].

DESCRIPTORS: *Chemical reactions, *Fluidized solids, *Catalysts, *Reaction kinetics.

Pomerantsev, V. V. and Rundygin, Yu. A.
AN INVESTIGATION INTO THE MECHANISM OF LOW-TEMPERATURE OXIDATION OF ELECTRODE CARBON. July 62 [4]p. 3 refs.
Order from ICE, in v. 2, no. 3, $15.00/year

Trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1962 [v. 5] no. 2, p. 3ff.

DESCRIPTORS: *Carbon, *Electrodes, Oxidation, Reaction kinetics, Chemisorption, Oxygen, Carbon dioxide.

Rehage, G.
EQUILIBRIUM AND TRANSPORT CHARACTERISTICS OF GELS AND CONCENTRATED HIGHMOLECULAR SOLUTIONS. [1962] 2p.
Order from SLA $1.10 62-16751

Trans. of unidentified article, n.p., n.d.

DESCRIPTORS: *Gels, *Polymers, Chemical equilibrium, Transport.

Repin, N. N. and Babalyan, G. A.
THE ACTION OF SURFACE-ACTIVE AGENTS ON THE LIFTING PROCESS. [1962] 7p.
Order from ATS $12.10 ATS-38P59R

Trans. of Izvest[iya] Vysshikh Ucheb[nykh] Zavedenii. Neft' i Gaz (USSR) 1961, v. 4, no. 8, p. 51-57.

DESCRIPTORS: *Surface-active substances, Lift.

Schulz, R. G.
DISTRIBUTION OF SURFACE-ACTIVE SUBSTANCES BETWEEN WATER AND ORGANIC SOLVENTS. [1962] 12p.
Order from ATS $15.75 ATS-64P62G

Trans. of [Kolloid Beihefte] (Germany) 1925, v. 21, p. 37-54.

DESCRIPTORS: Distribution, *Organic solvents, *Water, *Surface-active substances.

Shantarovich, P. S. and Pavlov, B. V.
THERMAL CRACKING OF METHANE. July 62 [4]p. 4 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of #Zhurnal Fizicheskoi Khimii (USSR) 1960 [v. 34] no. 5, p. 960ff.

DESCRIPTORS: *Methanes, Pyrolysis, Reaction kinetics, Hydrogen, Free radicals.

Shchegrov, L. N.
THE REACTION BETWEEN TITANIUM TETRACHLORIDE AND OXYGEN. [1962] 9p.
Order from ATS $12.75 ATS-46P64R

Trans. of Ural'sk[ii] Politekhn[icheskii] Inst[itut, Sverdlovsk]. Tr[udy] (USSR) 1960, v. 96, p. 82-92.

DESCRIPTORS: *Titanium compounds, Chlorides, *Oxygen, Chemical reactions.

Shostakovskii, M. F.
OXONIUM THEORY OF CATALYTIC CONVERSIONS OF VINYL ETHERS, I. [1962] 4p. 24 refs.
Order from OTS or SLA $1.10 62-16826

[Abstract] trans. of Zhur[nal] Obsh[chei] Khim[ii] (USSR) 1943, v. 13, no. 9/10, p. 674-684.

DESCRIPTORS: *Vinyl radicals, *Ethers, Catalysis, Theory, *Oxonium compounds, Complex compounds

Shostakovskii, M. F.
OXONIUM THEORY OF CATALYTIC CONVERSIONS OF VINYL ETHERS, II. [1962] 2p. 2 refs.
Order from OTS or SLA $1.10 62-16822

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1944, v. 14, no. 1/2, p. 102-112.

DESCRIPTORS: *Vinyl radicals, *Ethers, Catalysis, Theory, *Oxonium compounds, Complex compounds.

See Also 62-16826.

Shostakovskii, M. F.
OXONIUM THEORY OF CATALYTIC PROCESSES: CATALYTIC CONVERSIONS OF VINYL ETHERS. [1962] 2p. 10 refs.
Order from OTS or SLA $1.10 62-16768

[Abstract] trans. of Akademiya Nauk SSSR. Doklady, 1943, v. 41, no. 3, p. 124-127.

DESCRIPTORS: *Vinyl radicals, *Ethers, Catalysis, Theory, *Oxonium compounds, Complex compounds

See also 62-16822

S'ora, T. Ya. and Gumenyuk, A. G.
CREATING LIGHT-ABSORPTION CENTERS IN IRRADIATED SILVER BROMIDE AT LOW TEMPERATURES. [1962] 3p.
Order from ATS $5.00 ATS-28P63U

Trans. of [Odessa U. Trudy] (USSR) 1958, v. 148, no. 6, p. 25-27.

DESCRIPTORS: *Silver compounds, *Bromides, Light, Absorption, Color centers.

Sveshnikova, V. N.
SOLUBILITY IN THE TERNARY SYSTEM Al_2O_3 - P_2O_5 - H_2O AT 90°, tr. by Bertha P. Klenova, 19 Feb 62, 7p. 8 refs. TVA-3975.
Order from OTS or SLA $1.10 62-24465

Trans. of #[Zhurnal Neorganicheskoi Khimii] (USSR) 1960, v. 5, p. 477-480.

DESCRIPTORS: *Crystals, *Aluminum compounds, *Phosphates, *Hydrates, Solubility.

The solubility in the system Al_2O_3-P_2O_5-H_2O was investigated to concentrations of 50% P_2O_5 at 90°C. Two phases were found to exist: $AlPO_4 \cdot 2H_2O$ and $2Al_2(HPO_4)_3 \cdot 5H_2O$. The solubility of aluminum phosphate in phosphoric acid increases markedly, and this apparently is related to complex formation in solution. (Author)

Takeda, B.
EFFECT OF PLASTICIZER ON THE MOISTURE PERMEABILITY OF POLYVINYL CHLORIDE FILM. Pt. 5 of Absorption, Penetration, and Evaporation of Moisture. [1962] 9p.
Order from ATS $12.75 ATS-68P63J

DESCRIPTORS: *Vinyl chlorides, Films, Plastic films, *Plasticizers, *Moisture, Permeability, Adsorption, Penetration, Evaporation.

Tinyakova, E. I., Zhuravleva, T. G. and others.
THE CATIONIC ACTIVITY OF COMPONENTS OF COMPLEX CATALYSTS. [1962] 5p.
Order from ATS $7.75 ATS-62P63R

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1962, v. 144, no. 3, p. 592-595.

DESCRIPTORS: *Complex compounds, *Catalysts, Ions.

Tsentsiper, A. B., Eremin, E. N., and Kobozev, N. I.
A COMPARATIVE STUDY OF REACTION KINETICS IN BATCH CONVERSION OF VARIOUS HYDROCARBONS TO ACETYLENE USING AN ELECTRIC ARC TORCH. July 62 [4]p. 5 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1961, v. 141, no. 1, p. 117-[120].

DESCRIPTORS: *Hydrocarbons, Methanes, Ethanes, Propanes, Propenes, Decomposition, *Acetylenes, Reaction kinetics. *Electric arcs.

Vasil'ev, V. P., Zolotarev, E. K. and others.
MOST PROBABLE VALUES FOR THE CHEMICAL HEATS, ENERGIES AND ENTROPIES OF HYDRATION OF INDIVIDUAL IONS AT INFINITE DILUTION AND 25° C, tr. by Bertha P. Klenova. 23 Nov 60, 7p. 19 refs. TVA-3884.
Order from OTS or SLA $1.10 62-24453

Trans. of #[Zhurnal Fizicheskoi Khimii] (USSR) 1960, v. 34, p. 1763-1767.

DESCRIPTORS: *Thermochemistry, Hydrates, *Ions, Heat of formation, Energy, Entropy.

On the ground of a careful revision of the available thermochemical data as well as the use of new experimental results and comparison of different methods of calculation, the most probable values of the chemical heats, entropies and energies of hydration 25° C. and infinite dilution are given for 69 ions. (Author)

Vasserberg, V. E., Balandin, A. A., and Georgievskaya, T. V.
INHIBITION OF CATALYST SURFACE REACTIONS AND MOBILITY OF THE ABSORBED MOLECULES. July 62 [4]p. 8 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1961, v. 140, no. 5, p. 1110-[1113].

DESCRIPTORS: *Catalysts, *Aluminum compounds, Oxides, Surface properties, Adsorption, Inhibition, *Alcohols, Dehydration, Acetones, Ketones, Ethers, Acetonitriles, Cyanides, Acetates, Esters, Nitrogen compounds, Polymerization, Free radicals.

Vasserberg, V. E., Balandin, A. A., and Georgievskaya, T. V.
INTERACTION OF REACTING MOLECULES AT THE SURFACE OF DEHYDRATION CATALYSTS. July 62 [4]p. 2 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1961, v. 140, no. 4, p. 859-[862].

DESCRIPTORS: *Catalysts, *Aluminum compounds, Oxides, Iron compounds, Surface properties, Adsorption, Hydrocarbons, Propanols, Methanols, Polymerization, Decomposition, Dehydration.

Vyzgo, V. S. and Saibova, M. T.
HEATING CURVE OF MONOCALCIUM PHOSPHATE, tr. by Bertha P. Klenova. 11 Apr 61, 5p. 11 refs. TVA-3883.
Order from OTS or SLA $1.10 62-24452

Trans. of Akad[emiya] Nauk Uzbek[skoi] SSR [Tashkent]. Doklady, 1959, no. 3, p. 28-31.

DESCRIPTORS: *Calcium compounds, *Phosphates, Heating, Dehydration.

Wannagat, U. and Hohlstein, G.
REACTIONS OF DINITROSYL PYROSULFATE. [1962] 14p.
Order from ATS $20.50 ATS-25P64G

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (East Germany) 1956, v. 284, no. 4/6, p. 177-190.

DESCRIPTORS: *Nitrogen compounds, *Sulfates, Chemical reactions.

Yamamoto, K., Morita, Y. and others.
REACTION BETWEEN KEROSINE AND STEAM IN THE PRESENCE OF MULTICOMPONENT CATALYSTS. [1962] 11p.
Order from ATS $19.75 ATS-67P64J

Trans. of Kogyo Kagaku Zasshi (Japan) 1960, v. 63, no. 8, p. 1372-1376.

DESCRIPTORS: *Kerosene, *Steam, Chemical reactions, *Catalysts.

EARTH SCIENCES

Gurvich, I. I. and Gil'bershtein, P. G.
DETERMINATION OF THE ATTENUATION CONSTANTS OF SEISMIC WAVES. [1962] 9p.
Order from ATS $13.75 ATS-18P63R

Trans. of Geofiz[icheskaya] Razvedka (USSR) 1961, no. 4, p. 31-14.

DESCRIPTORS: Determination, *Attenuation, *Seismic waves.

Climatology and Meteorology

Bakulina, E. V., Gromova T. N., and Krasikov, P. N.
METHOD OF USING AQUEOUS SOLUTIONS OF LEAD IODIDE FOR MODIFYING SUPERCOOLED CLOUDS AND FOGS. [1962] 6p.
Order from ATS $12.00 ATS-14P65R

Trans. of Gl[avnaya] Geofiz[icheskaya] Observ[atoriya, Leningrad]. Trudy (USSR) 1962, no. 126 [188] p. 10-15.

DESCRIPTORS: *Clouds, *Fog, Climatic factors, *Lead compounds, *Iodides, Solutions.

Gromova, T. N., Krasikov, P. N. and others.
EXPERIMENTS ON SEEDING SUPERCOOLED CLOUDS WITH AQUEOUS LEAD IODIDE SOLUTIONS. [1962] 8p.
Order from ATS $11.50 ATS-15P65R

Trans. of Gl[avnaya] Geofiz[icheskaya] Observ[atoriya, Leningrad]. Tr[udy] (USSR) 1962, no. 126 [188] p. 16-21.

DESCRIPTORS: *Clouds, Climatic factors, *Lead compounds, *Iodides, Solutions.

Kogan-Beletskii, G. I.
ON THE QUESTION OF THE NATURE OF BALL LIGHTNING. [Oct 59] 4p. 1 ref. MDF K-196; AFCRL-TN-59-795; AD-228 862.
Order from OTS $0.50 62-11486

Trans. of Priroda (USSR) 1957 [v. 46] no. 4, p. 71-73.

DESCRIPTORS: Electrical discharges, *Lightning, Theory, *Aviation accidents

Two cases are described of ball lightning striking an airplane. The observations refute the notion that the motion of ball lightning is determined by the direction of air flow. The character of the trajectories of the ball lightning relative to the aircraft surface and to the air-flow, exactly as is the case in a lightning discharge, verifies the hypothesis of P. L. Kapitsa (Akad. Nauk Doklady SSSR 101: 245-248, 1955; available in translation from OTS or ETC as 61-17546) that the energy of electromagnetic oscillations must be supplied continuously to ball lightning while it glows, and that the source of this energy is outside the volume of the lightning. In both cases the ball lightning disappeared with an explosion, which did not cause any substantial damage to the aircraft. The explanation for the explosion is also in accord with the theory of Kapitsa.

Nakorenko, N. F.
CHARTS OF SPECIFIC HUMIDITY OF THE NORTHERN HEMISPHERE. [1962] [31]p. 5 refs. Trans. no. 19; DSIR NLL M 1938.
Order from OTS or SLA $3.60 62-25866

Trans. of Glav[naya] Geof[izicheskaya] Obs[ervatoriya] Lenningrad. Trudy (USSR) 1957, no. 70[132] p. 60-91.

DESCRIPTORS: *Humidity, *Northern Hemisphere, *Meteorological charts, Meteorological data.

Terziev, F. S. and Riykonen, A. N.
HYDROMETEOROLOGICAL SERVICING OF THE FISHING INDUSTRY IN THE BARENTS SEA AND THE ATLANTIC OCEAN. 20 Nov 62 [9]p. JPRS: 16261.
Order from OTS or SLA $1.10 63-13308

Trans. of Meteorologiya i Gidrologiyâ (USSR) 1962, no. 8, p. 39-41.

DESCRIPTORS: *Hydrology, *Meteorology, Fishes, Fisheries, Oceanographical data, Oceanographic vessels, *Barents sea, *Atlantic ocean, Weather forecasting.

Yeh, Tu-cheng.
RECENT DEVELOPMENTS IN METEOROLOGY. 27 Nov 62 [12]p. JPRS: 16379.
Order from OTS or SLA $1.60 63-13324

Trans. of K'o Hsüeh T'ung Pao (Chinese People's Republic) 1962, no. 2, p. 28-33.

DESCRIPTORS: *Meteorology, Meteorological data, Collecting methods, Meteorological instruments, Airborne, Satellite vehicles, Weather forecasting, Automation, Artifical precipitation.

Geodesy

Abel'skii, M. E.
SOME IMPROVEMENTS IN THE GAK-ZM GRAVIMETER. 15 Nov 62 [8]p. JPRS: 16197.
Order from OTS or SLA $1.10 63-13096

Trans. of Razvedochnaya i Promyslovaya Geofizika (USSR) 1961, v. 42, p. 72-76.

DESCRIPTORS: *Density sensitive indicators, *Gravity, Measurement, Instrumentation, Design.

Averko, E. M.
GRAPHIC-ANALYTICAL METHOD OF ANALYSIS AND SYNTHESIS OF SEISMIC OSCILLATIONS. [1962] 12p.
Order from ATS $15.75 ATS-48P63R

Trans. of Geol[ogiya] i Geofiz[ika] (USSR) 1962, no. 1, p. 88-99.

DESCRIPTORS: *Seismic waves, Oscillations, Analysis, Synthesis.

Geology

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: [SELECTED] TRANSLATIONS NO. 12. 8 Nov 62 [15]p. JPRS: 16094.
Order from OTS or SLA $1.60 62-33676

Trans. of Ti Chih Hsüeh Pao (Chinese People's Republic) 1962, v. 42, no. 1, p. 102-104; and Chung Kuo Ch'u Mu Shou I (Chinese People's Republic) 1962, no. 5, table of contents.

DESCRIPTORS: *Geology, Conferences, *Animals, *Veterinary medicine, Periodicals, Indexes, *China.

Contents:
Geological workers in the capital celebrate the fourtieth anniversary of the Geological Society of China, by Chang An-ti
Shensi Province Geological Conference, Northwest U., 28-30 Dec 61: brief report
Animal husbandry and veterinary medicine in China, 1962, no. 5, table of contents.

STUDIES IN GEOLOGY. 13 July 62 [13]p. JPRS: 14459.
Order from OTS or SLA $1.60 63-13107

Trans. of Nedelya (USSR) 1962, no. 16, 15-21 Apr, p. 10-11.

DESCRIPTORS: *Geology, *Geophysical prospecting, Ores, Minerals, Rock, Petroleum, Coal, Deposits, Maps.

Contents:
Two hundred thousand are out prospecting, by A. Sidorenko
Where, what, and how to look for various elements, by S. Lugov
Things to remember while on a field trip
Literature soon to be published for the ameteur prospector
How and where to make a claim
Map of industrial mineral deposits.

Abdullaev, Kh. M.
DIKES AND ORE MINERALIZATION. 1962, 1v.
Order from AGI $11.00/microfilm copy

Trans. in typescript of mono. Daiki i Orudenenie, Moscow, 1957, 232p.

DESCRIPTORS: Geological survey, *Minerals, *Ore, Petrology, Rock.

Chepikov, K. R., Ermolova, E. P., and Orlova, N. A.
THE QUESTION OF POROSITY CHANGES IN SANDSTONES WITH DEPTH. [1962] 4p.
Order from ATS $7.00 ATS-03P65R

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1962, v. 144, no. 2, p. 435-437.

DESCRIPTORS: *Geophysical prospecting, *Rock, Porous materials.

Fuha, Keiichiro.
REPORT ON THE FLUORINE CONTENT OF PRECIPITATES AND SOIL OF TAMAGAWA HOT SPRING, AKITA PREFECTURE. Rept. 3 on Spectroscopic Analysis of Fluorine Using CaF Band Spectrum. May 61 [11]p. 4 refs. Technical notes FRL-TN-70; AD-256 525.
Order from OTS or SLA $1.60 62-25217

Trans. of Nihon Kagaku Zasshi (Japan) 1954, v. 75, p. 1957-1959.

DESCRIPTORS: *Fluorine, *Hydrology, Soils, Geology, *Calcium compounds, *Fluorides, Spectrographic analysis, Sedimentation, Japan

Applying a semiquantitative spectroscopic analysis utilizing the CaF band spectrum to samples collected from Tamagawa Hot Spring, the author investigated the fluorine content of the hot spring precipitates, soil from the downstream river bed and rocks in the vicinity, to determine the variability of the fluorine contained in the hot sping water. (Author)

Knaap, W. van der.
EFFECT OF A CHANGE IN THE PORE VOLUME IN OIL-BEARING ROCK ON THE ESTIMATE OF OIL RESERVES. [1962] 15p.
Order from ATS $19.85 ATS-45P64G

Trans. of Erdöl [und] Kohle (West Germany) 1960, v. 13, no. 5, p. 305-312.

DESCRIPTORS: *Oils, Rock, Porous materials, Volume, Geophysical prospecting.

Peterson, G.
BONDING OF DEEP WELL CEMENTS IN THE ANNULUS. [1962] 56p.
Order from ATS $57.75 ATS-53P63G

Trans. of Erdöl Z[eitschrift] (West Germany) 1962, v. 78, no. 6, p. 339-368.

DESCRIPTORS: *Cements, Bonding, *Well drilling, Boreholes

Pronina, T. V.
NEW ORDOVICIAN AND SILURIAN PARATHURAMMINIDAE OF THE URALS: EXCERPT. [1962] 21p.
Order from ATS $29.90 ATS-17P59R

Partial trans. of unidentified mono. issued by Vsesoyuz-[nyi] Geol[ogicheskii] Inst[itut] Moscow, 1960.

DESCRIPTORS: *Aquatic animals, *Geology, *Paleoecology.

Vassoevich, N. B.
THE ORIGIN OF PETROLEUM. [1962] 24p.
Order from ATS $33.75 ATS-47P63R

Trans. of Moscow U. Vestn[ik]. Ser[iya] 4: Geol[ogiya] (USSR) 1962 [v. 17] no. 3, p. 10-30.

DESCRIPTORS: *Petroleum, Geology.

Physics of the Atmosphere

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 24 on Soviet Developments in Selected Problems in Astrophysics and Geophysics; AID Work Assignment no. 3. 30 Apr 62 [50]p. 27 refs. AID rept. 62-55.
Order from OTS or SLA $4.60 62-25766

DESCRIPTORS: *Upper atmosphere, Atmosphere, Ionosphere, Meteorology, Sun, *Solar energy, *Van Allen radiation belt, Cosmic rays, *Electromagnetic waves, *Atmospheric electricity.

Contents:
Solar radiation and the ionosphere
Van Allen belts and cosmic rays
Telluric currents
Meteorology of the upper atmosphere.
See also: 62-25767

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 25 on Soviet Developments in Selected Problems in Astrophysics and Geophysics; AID Work Assignment no. 3. 31 May 62 [32]p. 16 refs. AID rept. 62-72.
Order from OTS or SLA $3.60 62-25769

DESCRIPTORS: *Upper atmosphere, Atmosphere, Ionosphere, *Meteorology, Sun, *Solar energy, *Van Allen radiation belt, Cosmic rays, *Electromagnetic waves, Atmospheric electricity.

Contents:
Solar radiation and the ionosphere
Van Allen belts and cosmic rays
Telluric currents
Meteorology of the upper atmosphere.
See also 62-25766

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 26 on Soviet Developments in Selected Problems in Astrophysics and Geophysics; AID Work Assignment no. 3. 30 June 62 [28]p. 21 refs. AID rept. 62-105; [NP-11961]; AD-281 840.
Order from OTS or SLA $2.60 62-32355

DESCRIPTORS: *Upper atmosphere, Atmosphere, Ionosphere, *Meteorology, Sun, *Solar energy, *Van Allen radiation belt, Cosmic rays, *Electromagnetic waves, *Atmospheric electricity, Satellite vehicles.

Contents:
Solar radiation and the ionosphere
Van Allen belts and cosmic rays
Atmospheric electricity
Satellite and missile data
Meteorology of the upper atmosphere.
See also: 62-25769

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 28 on Soviet Developments in Selected Problems in Astrophysics and Geophysics; AID Work Assignment no. 3. 27 Sep 62 [26]p. 18 refs. AID rept. 62-135.
Order from OTS or SLA $2.60 62-33577

DESCRIPTORS: *Upper atmosphere, Atmosphere, Ionosphere, Meteorology, Sun, *Solar energy, Van Allen radiation belt, Cosmic rays, *Electromagnetic waves, *Atmospheric electricity, Satellite vehicles.

Contents:
Solar radiation and the ionosphere
Telluric currents
Atmospheric electricity
Satellite and missile data.

Likhter, Ya. I.
INVESTIGATIONS OF ATMOSPHERICS IN THE SOVIET UNION, 1957-59. 4 Apr 62, 3p. 1 ref. AID Rept. 62-44.
Order from OTS or SLA $1.10 62-24480

Abstract trans. of Geomagnetizm i Aeronomiya (USSR) 1962 [v. 2, no. 1] p. 228-231.

DESCRIPTORS: *Atmospherics, *Radio interference, Atmospheric electricity, Periodic variations, Very low frequency, *Whistlers.

In a Soviet study of atmospherics (sferics) in 1957-1959, the following area of interest were examined: (1) atmospheric radio disturbances, (2) the propagation of ultra-low-frequency waves by means of atmospherics, (3) total intensity of atmospherics, and (4) whistlers. (Author)

ENGINEERING

A COPY PRINTING APPARATUS. [1961] 15p. (6 figs. omitted).
Order from OTS or SLA $1.60 62-14457

Trans. of Belgian patent application 603224, by Lumoprint Zindler K. G. [1960] (Priority of an appl. for pat. filed in the German Federal Republic, 28 Apr 60, under the no. L 36 026 IX/57c).

DESCRIPTORS: *Photographic recording systems, *Printing, Thermal radiation, Lighting equipment.

Agaletskii, P. N.
REGARDING THE CALIBRATION OF THE PIU-1 ACCELEROMETER. [1962] [1]p. [DSIR] NLL M. 4833.
Order from OTS or SLA $1.10 62-24877

Trans. of #Izmeritel'naya Tekhnika (USSR) 1961, no. 5, p. 17.

DESCRIPTORS: *Accelerometers, Vibration, Calibration, Piezoelectric effect.

Buzinov, S. N. and Levykin, E. V.
A METHOD FOR CALCULATING BASIC PARAMETERS OF UNDERGROUND GAS STORAGE FACILITIES. [1962] 12p.
Order from ATS $14.50 ATS-30P63R

Trans. of Gaz[ovaya] Prom[yshlennost'] (USSR) 1961, v. 6, no. 11, p. 39-46.

DESCRIPTORS: *Gases, Storage, *Underground structures, Mathematical analysis, *Storage tanks, Natural gas.

Hilter, F. T.
A DEVICE FOR THE PRODUCTION OF A CONVERGENT ULTRASONIC BEAM. 1962, 4p. 2 refs.
Order from MUL $3.75 MUL-T62-1

Trans. of German patent announcement 760 163, n.d.

DESCRIPTORS: *Ultrasonic equipment, Design, Ultrasonic radiation, Focusing, Beams.

Aeronautical Engineering

PROBLEMS OF THE AERODYNAMICS OF HELICOPTER LIFTING ROTORS (Voprosy Aerodinamiki Nesushchikh Vintov Vertoletov). 3 Oct 62 [15p]p. 22 refs.
FTD TT-62-815, AD-286 576.
Order from OTS or SLA $11.50 62-33534

Unedited rough draft trans. of [Aviatsionnyi Institut, Moscow. Trudy] (USSR) 1961, v. 142 [p. 5-141].

DESCRIPTORS: *Helicopter rotors, *Lift, *Aerodynamics, Vortices, Theory, Fluid flow, *Vertical take-off planes, Landing.

Contents:
Aerodynamic investigation of rotors for helicopters in hovering, by F. P. Kurochkin
Generalized vorticity theory of helicopter lifting roter, by Van Shi-tsun'
Investigation of vertical-descent modes of helicopters, by V. I. Shaidakov.

Denisov, N.
LONG SECONDS. 12 Apr 62 [11]p. (1 illus. omitted).
FTD-TT-62-402.
Order from OTS or SLA $1.60 62-24918

Unedited rough draft trans. of Kryl'ya Rodiny (USSR) 1961 [no. 10] p. 6-8.

DESCRIPTORS: *Pilots, *Flight testing, Air speed, Aircraft, Control, Supersonic planes.

The "long seconds" discussed are those which occurred when "test pilot, communist Georgiy Konstantinovich Mosolov" was trying to regain control of a plane he was testing. A flight is also discussed in which Mosolov won a world record in flight speed while piloting an E-66.

Eger, S.
TWENTIETH CENTURY, CENTURY OF SPEED: TU-124 MEDIUM RANGE JET PASSENGER AIRCRAFT. 22 May 62 [14]p. (illus. omitted). FTD-TT-62-764.
Order from OTS or SLA $1.60 62-25758

Unedited rough draft trans. of Grazhdanskaya Aviatsiya (USSR) 1962 [v. 19] no. 4, p. 10-13.

DESCRIPTORS: Transport planes, *Jet planes, Commercial planes, Design, Power, Turbofan engines, Aerodynamics, Velocity.

Chemical Engineering

PROCEDURE FOR THE PRODUCTION OF CONDENSATION PRODUCTS. [1962] 4p.
Order from K-H $5.00 K-H-3253

Trans. of Italian patent 367,704 [1939].

DESCRIPTORS: *Condensation, Production, Chemicals.

PROCESS AND APPARATUS FOR CRACKING HYDROCARBONS BY MEANS OF AN ELECTRIC ARC. [1962] 11p.
Order from ATS $19.35 ATS-52P64F

Trans. of Belgian patent 611,880, by Knapsack-Griesheim AG, , Germany, appl filed 24 Dec 60, under K 42,507 IV b/20.

DESCRIPTORS: *Hydrocarbons, Decomposition, *Electric arcs.

A PROCESS OF MANUFACTURING CARBON BLACK: OBJECTION TO PATENT. Nov 62 [23]p. 10 refs.
Order from SA $25.00 SA Code-P5

Trans. of papers relating to an objection filed to published Japanese patent 3168/1961 (appl. no. 26636/1959) by Columbian Carbon Co. (U.S.A.) against patent applicant Godfrey L. Cabot, Inc. (U.S.A.) 13 Oct 61, application for objection, 14 June 61.

DESCRIPTORS: *Carbon black, Manufacturing methods, Hydrocarbons, Alkali metals.

TECHNICAL NEWS, 1941, VOL. 10, NO. 11: [SELECTED ABSTRACTS IN RELATION WITH PETROLEUM RESEARCH]. [1961] 3p.
Order from OTS or SLA $1.10 61-20802

Abstract trans. of Novosti Tekhniki (USSR) 1941, v. 10, no. 11, p. 33-35, 42-43, 49.

DESCRIPTORS: *Petroleum industry, *Materials, Steel, Insulating materials, Friction, Electricity, Rubber.

Contents:
Cold-resisting steel (for oil refining) by Yu Gapanovich
Insulating material from asphalt and slag, by B. Tel'nov
Industrial use of friction electricity
Rubber filters.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 37. 13 Nov 62 [40]p.
JPRS: 16159.
Order from OTS or SLA $3.60 63-13079

Trans. of #Kauchuk i Rezina (USSR) 1962 [v. 21] no. 8, p. 40-44; Promyshlennost' Armenii (USSR) 1962 [v. 5] no. 7, p. 33-35 and 46-47; and from Ekonomicheskaya Gazeta (USSR) 1962, no. 37 [58] p. 34; Zarya Vostoka (USSR) 1962, 6 Sep; Bakinskii Rabochii (USSR) 1962, 25 Aug; Komsomol'skaya Pravda (USSR) 1962, 25 Aug; Sovetskaya Latviya (USSR) 1962, 6 Sep.

DESCRIPTORS: *Chemical industry, Industry, Industrial production, *Acetylenes, Production, *Plastics, Coal, Synthetic rubber, *Dyes, Synthetic fibers, *Rubber, Automation, Esters, Sulfur, Carbon.

Contents:
Obsolescence of calcium carbide method for production of acetylene, by Yu. Turov
Plastics from Rabdopissit coal, by N. Yashina
Control of production at the Sumgait synthetic rubber plant, by V. Anisimov
Progress in dye development, by Yu. Roman'kov
Lagging construction of the Daugavpils synthetic fiber plant, by S. Kovalenko
Work of the technical rubber products industry in 1961, by A. F. Karaseva
Automation of production processes at the Erevan technical rubber products plant, by M. Babayan
Krotilin: new preparation
Lagging expansion of the Rozdol sulfur combine, by I. Ivannikov
Carbon production at the Chernigov plant, by M. Bagrov.

Abdulaev, Ya. A.
INVESTIGATING THE SOLUBILITY OF A HYDROGEN-NITROGEN MIXTURE IN LIQUID CARBON DIOXIDE, tr. by Bertha P. Klenova. 13 Dec 61, 6p. TVA-3968.
Order from OTS or SLA $1.10 62-24461

Trans. of [Zhurnal Prikladnoi Khimii] (USSR) 1941, v. 14 [no. 3] p. 302-304.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 61-13294, DSIR LLU M. 1899 [1961] [7]p.

DESCRIPTORS: *Ammonia, Synthesis, *Hydrogen, *Nitrogen, Mixtures, Solubility, *Carbon dioxide, Liquefied gases.

The solubility of a nitrogen-hydrogen mixture in liquid carbon dioxide at temperatures of 0°, 10°, and 20°C. was determined at pressures up to 203 atm. The solubility of this mixture at constant pressure increases as the temperature increases. At constant temperature the solubility of this mixture increases as the pressure increases. Low temperatures and pressures must be applied to obtain the purest carbon dioxide. The data on the solubility of a nitrogen-hydrogen mixture are compiled in tables and shown in figures. (Author)

Aleksandrov, I. A. and Skoblo, A. I.
BASIC CHARACTERISTICS AND APPLICATION RANGES FOR VARIOUS RECTIFICATION AND ABSORPTION COLUMN PLATES. July 62 [4]p. 35 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[iya] i Tekh[nologiya] Topliv i Masel (USSR) 1962 [v. 7, no. 1, p. 45-[50].
Another trans. is available from ATS $11.40 as ATS-72P60R [1962] 6p.

DESCRIPTORS: *Laboratory equipment, Towers (Chemistry), Conveyors, Design, *Fractionation, *Absorption.

Berkovich, M. Ya., Spivak, A. I. and others.
SOME PROBLEMS IN DRILLING WHEN USING GASEOUS AGENTS FOR CLEANING THE BOTTOM OF THE HOLE. [1962] 6p.
Order from ATS $10.00 ATS-64P63R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft' i Gaz (USSR) 1962, v. 5, no. 5, p. 29-34.

DESCRIPTORS: *Well drilling, Drilling fluids, Cleaning fluids, Gases.

Blume, H., Munzing, J., Sturtz, H.
DEVELOPMENT OF A CATALYST FOR THE REMOVAL OF ACETYLENE FROM AN ETHANE-ETHYLENE FRACTION BY SELECTIVE HYDROGENATION. [1962] 16p.
Order from ATS $21.75 ATS-64P64G

Trans. of Chem[ische] Tech[nik] (East Germany) 1962, v. 14, no. 4, p. 214-221.

DESCRIPTORS: *Ethanes, *Ethylenes, *Hydrogenation, *Acetylenes, Separation, Catalysts.

Borovik, E. S. and Mikhailov, I. F.
AN AUTOMATED CYCLE FOR LIQUEFYING HYDROGEN WITHOUT USING A GAS HOLDER. 27 Feb 62 [8]p. 4 refs. FTD-TT-62-24.
Order from OTS or SLA $1.10 62-24954

Unedited rough draft trans. of Khimicheskoe Mashinostroenie (USSR) 1961 [v. 3] no. 1, p. 1-2.

DESCRIPTORS: *Liquefied gases, Gases, *Hydrogen, Preparation, Compressors, Automatic, Pneumatic valves.

Demchenko, P. A.
SOLUBILIZATION OF HYDROCARBONS IN SOLUTIONS OF SYNTHETIC FATTY ACID SOAPS. [1962] 4p.
Order from ATS $6.50 ATS-23P63R

Trans. of Maslob[oino]-Zhir[ovaya] Prom[yshlennost'] (USSR) 1959, v. 25, no. 10, p. 22-24.

DESCRIPTORS: *Soaps, *Fatty acids, Solutions, Hydrocarbons, Solubility.

Durr, H.
AUTOMATIC PHOSPHATING PLANTS FOR SMALL TO MEDIUM SCALE PRODUCTION. 14 Nov 62, 1500 words
Order from TTIS $15.00 TTIS PN 223

Trans. of Galvanotechnik und Oberflächenschutz (Switzerland) 1962, v. 3, Aug, p. 199-202.

DESCRIPTORS: *Phosphates, Production, Automation.

Etlis, V. S. and Grobov, L. N.
A METHOD OF PREPARING CYCLIC ALKYLENE SULFITES. [1962] 2p.
Order from ATS $4.00 ATS-68P64R

Trans. of Soviet certificate of authorship 128, 462, filed 3 July 59, under 632, 908/23.

DESCRIPTORS: Alkyl radicals, *Sulfites, Preparation.

Gefter, E. L.
SOME PROSPECTS FOR THE USE OF ORGANOPHOSPHORUS COMPOUNDS IN INDUSTRY. [1962] 12p.
Order from ATS $17.75 ATS-76P63R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 46-56.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: Chemical industry, *Organic compounds, *Phosphorus compounds, Chemistry.

Gnauck, G. and Kreig, H.
PROCESS FOR DETERMINING ARGON AND NITROGEN IN OXYGEN BY GAS CHROMATOGRAPHY OVER A MOLECULAR SIEVE. Sep 62.
Order from TTIS $3.60 TTIS NS 41

Trans. of East German patent 23,207, appl. 15 Oct 58, pub. 28 May 62.

DESCRIPTORS: *Argon, *Nitrogen, Determination, *Oxygen, *Gas chromatography, *Adsorbents.

Gorlovskii, I. A. and others.
TECHNOLOGY OF ULTRAMARINE PRODUCTION. Sep 62, 1700 words.
Order from TTIS $21.00 TTIS 4015

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1961, no. 3, p. 20-25.

DESCRIPTORS: *Pigments, *Bleaching agents, Production.

Grzymek, Jerzy.
METHOD OF OBTAINING DECREPITATING CLINKER OF DICALCIUM SILICATE OR OF MATERIAL CONTAINING SAME. [1962] [6]p.
Order from OTS or SLA $1.10 62-25120

Trans. of Polish patent 43443, cl. 12 m, 2, in effect since 31 Dec 59, pub. 30 Dec 60.

DESCRIPTORS: *Calcium compounds, *Silicates, Processing, Metallurgical analysis, Materials, Metals, Carbon compounds, Monoxides, Hydrogen, Stability, Particles, Crystals, Lattices, Temperature, Iron compounds.

A method is claimed for obtaining decrepitating clinker of dicalcium silicate or materials containing same. The fact that the raw material is subjected to calcining together with substances containing carbon. At the high calcining temperature, water is introduced in order to produce, from the carbon contained in the calcined mass, nascent carbon monoxide and hydrogen which then deprive the chemical substances in the raw material of their stabilizing properties. Because of this, one obtains a rapid and complete decrepitation of the clinker. The process is completed within 30 minutes, yielding active particales ranging in size from 0.5 to 20 microns.

Gulisade, M. P. and Makhmudov, D. M.
THE EFFECT OF CERTAIN FACTORS ON THE ANGLE BUILD-UP AND DIRECTION OF DEVIATION IN SLANT HOLES AS A FUNCTION OF THE DISTANCE DRILLED WITH A DEFLECTOR. [1962] 5p.
Order from ATS $8.25 ATS-63P63R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft' i Gaz (USSR) 1962, v. 5, no. 5, p. 39-44.

DESCRIPTORS: *Well drilling, *Mud deflectors, Effectiveness.

Gupalo, Yu. P.
THE MOTION OF SOLID BODIES IN A FLUIDIZED BED. July 62 [3]p. 2 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1962 [v. 5] no. 2, p. 15ff.

DESCRIPTORS: *Fluidized solids, Particles, Density, Labelled substances, Cobalt.

Justa, S. and Kule, L.
INCREASED PRODUCTION IN A TECHNICAL OXYGEN PLANT. July 62 [7]p. 7 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Chemicky Prumysl (Czechoslovakia) 1962 [v. 12(37)] no. 1, p. 12ff.

DESCRIPTORS: *Towers(Chemistry), *Distilling plants, *Oxygen, Production, Pressure, Nitrogen, Hydrodynamics.

Khodorov, E. I.
ENTRAINMENT OF MATERIALS FROM ROTARY KILNS (Unos Materiala iz Vrashchayushchikhsya Pechei). [1962] [13]p. (foreign text included) 7 refs.
Order from OTS or SLA $1.60 62-16007

Trans. of Khimicheskaya Promyshlennost' (USSR) 1961, no. 6, p. 416-420.

DESCRIPTORS: *Rotary furnaces, Temperature, Fuel consumption, Gases, Particles, Motion, Velocity, Turbulence, Gas flow, Heating.

Selix, M.
PRESSURE DROPS ON TURBOGRID TRAYS. July 1962 [5]p. 9 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Chemicky Prumysl (Czechoslovakia) 1962 [v. 12(37)] no. 2, p. 73ff.

DESCRIPTORS: *Conveyers, *Hydraulic systems, Pressure, Fluid flow, Water, Kerosene, Surface tension, Viscosity, Foams.

Kopylov, V. E.
DEFLECTION OF DIAMOND-DRILLED WELLS. [1962] 5p.
Order from ATS $6.50 ATS-42P64R

Trans. of Razvedka i Okhrana Nedr (USSR) 1962, v. 28, no. 6, p. 21-24.

DESCRIPTORS: Petroleum, Sources, *Well drilling, Deflection, Diamonds.

Kraffcyzk, K.
NEUTRALISATION OF HYDROCHLORIC ACID PICKLE LIQUOR. Oct 62, 3000 words.
Order from TTIS $36.00 TTIS 2422

Trans. of Forschungsges[sselchaft] Blechverarbeitung e.V.]. Mitt[eilungen] (Germany) 1962 [6 Jan] p. 143-150.

DESCRIPTORS: *Pickling compounds, *Hydrochloric acid, Processing, Neutralization.

Kutepov, A. M.
CENTRIFUGAL SEPARATION OF SECONDARY VAPORS IN EVAPORATION OF SOLUTIONS. July 62 [5]p. 7 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1962, no. 1, p. 60ff.

DESCRIPTORS: Solutions, Evaporation; Vapors, Separation, *Centrifuge separation, Numerical analysis.

Ligeti, Gyorgy.
EFFORTS TO INCREASE THE NUMBER OF REVOLUTIONS PER SECOND: ULTRACENTRIFUGES IN SCIENCE AND ENGINEERING. 7 Dec 61 [5]p. (3 figs. omitted). JPRS: 11396.
Order from OTS or SLA $1.10 62-19680

Partial trans. (some sections summarized) of Nepszeru Technika (Hungary) 1961, v. 10, no. 7, p. 204-205.

DESCRIPTORS: *Ultracentrifuges, Rotation, Velocity, Centrifuges.

Ligett, Waldo Buford and Wolf, Calvin Newton.
METHOD FOR THE PREPARATION OF α-CYANO-β-(MONOBROMOPHENYL)-ACRYLIC ACIDS, THEIR SALTS AND ESTERS, WHICH ARE ACTIVE PLANT GROWTH REGULATORS OR FUNGICIDES. [1962] 5p. (refs. omitted).
Order from OTS or SLA $1.10 62-16279

Trans. of German patent 1,044,070, by Pittsburgh Coke & Chemical Co. [Nov 1958].

DESCRIPTORS: Plants, *Growth substances, *Fungicides, Cyano radicals, Phenyl radicals, *Acrylic acids, Salts, Esters, Preparation.

Lysenko, V. D.
THE PROBLEM OF PLANNING DEVELOPMENT OF NONUNIFORM RESERVOIRS. [1962] 5p.
Order from ATS $8.25 ATS-20P64R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft' i Gaz (USSR) 1962, v. 5, no. 5, p. 53-57.

DESCRIPTORS: *Hydraulic reservoirs, Design.

Malofeev, G. E.
COMPARATIVE EVALUATION OF FORMULAS FOR COMPUTING THE HEATING OF A FORMATION DURING INJECTION OF A HOT LIQUID. [1962] 6p.
Order from ATS $10.75 ATS-23P64R

Trans. of Neft[yanoe] Khoz[yaistvo] (USSR) 1962, v. 40, no. 4, p. 48-52.

DESCRIPTORS: *Liquids, Temperature, Injection, *Heat of formation, Determination.

Niesen, H.
ELECTRICAL CONDUCTIVITY OF SOLVENTS, PLASTICIZERS, AND BINDERS. [1962] 6p.
Order from ATS $8.75 ATS-31P65G

Trans. of Farbe und Lack (West Germany) 1961, v. 67, no. 5, p. 299-301.

DESCRIPTORS: *Plasticizers, *Organic solvents, *Binders, *Electrical conductance.

Pariiskii, Yu. M.
PRINCIPLES OF MOST EFFICIENT ROCK CRUSHING DURING DRILLING. [1962] 9p.
Order from ATS $12.00 ATS-43P63R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Geol[ogiya] i Razvedka (USSR) 1962, v. 5, no. 4, p. 134-142.

DESCRIPTORS: *Rock, *Fracture (Mechanics), *Well drilling, Geology.

Patrushev, D. A. and Mikulinskii, A. S.
CHANGE OF CHARGE IN THE MELTING PROCESS IN THE PHOSPHORUS FURNACE, tr. by Bertha P. Klenova. 19 July 61, 19p. 24 refs. TVA-3929.
Order from OTS or SLA $1.60 62-24458

Trans. of Ural'[skii] Nauch[no]-Issledovatel'[skii] Khim[icheskii] Inst[itut]. Trudy (USSR) 1957 [v. 5] p. 236-251.

DESCRIPTORS: *Phosphorus, Reduction, Melting, *Furnaces, Slags.

Conclusions regarding the principal reactions which take place in a plant furnace were derived from laboratory experiments, observations of plant-furnace operation, and data in the literature. The reduction of phosphates begins in the solid phase in the middle zones of the furnace at about 1000° C. The process goes over the formation of intermediate compounds of the lower steps of phosphorus oxidation. The rate of the process in the solid phase, however, is low and as a whole it plays merely an auxiliary part in a plant furnace. The reduction of phosphates to phosphorus in a plant furnace takes place predominantly in the liquid phase. The primary slag contains considerable quantities of P_2O_5 which are decreased during reduction in the melt. The excess or unreacted coke accumulates in the upper layers of the slag and is partially discharged through the tapholes and partially drained off by periodic "washings" of the charge without reductance. The reaction mechanism of reduction for the production of phosphorus from natural phosphates in a plant furnace is a function of the temperature, the chemical and granulometric compositions of the charge and, to a certain extent, other parameters and factors of operation, particularly electric arc heating. (Author)

Peinze, G.
CONTINUOUS DIMETHYL FORMAMIDE PRODUCTION. 14 Nov 62, 1000 words.
Order from TTIS $1.80 TTIS NS 56

Trans. of East German [patent] 23,488, appl. 10 June 58, pub. 24 July 62.

DESCRIPTORS: *Formamides, Methyl radicals, Production, Amines, Carbon compounds, Monoxides, Formates.

Rozental', A. L.
CHEMICAL REACTIONS OF GASES WITH SOLIDS IN A FLUIDIZED BED. July 62 [6]p. 11 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Kinetika i Kataliz (USSR) 1961 [v. 2] no. 6, p. 838-[846].

DESCRIPTORS: *Fluidized solids, Gases, Solids, Chemical reactions, Reaction kinetics, Alumina-silica catalysts, Integral transformations.

Schwabe, K.
PROCESS FOR ACTIVATING CHEMICAL REACTIONS IN GALVANIC CELLS OR ACCUMULATORS. Sep 62, 800 words.
Order from TTIS $7.00 TTIS NS 38

Trans. of East German patent 23,172 [1962].

DESCRIPTORS: *Radioactive waste, Chemical reactions, *Storage batteries, *Fuel cells.

Schwind, H.
USE OF BINARY REFRIGERANT MIXTURES AND THEIR REPRESENTATION IN THE ENTHALPY-PRESSURE DIAGRAM. [1962] 14p.
Order from ATS $15.85 ATS-95P64G

Trans. of Kältetechnik (West Germany) 1962, v. 14, no. 4, p. 98-105.

DESCRIPTORS: *Refrigerants, Enthalpy, *Pressure.

Slin'ko, M. G. and Beskov, V. S.
CALCULATION OF CONTACT EQUIPMENT WITH ADIABATIC CATALYST LAYERS FOR OXIDATION OF SULFUR DIOXIDE. July 62 [6]p. 6 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 12, p. 826-831.

DESCRIPTORS: *Computers, Programming, *Catalysts, *Sulfur compounds, Dioxides, Oxidation, Heat exchangers, Specific heat.

Smirnov, N. N., Pavlushchenko, I. S., and Romankov, P. G.
THE DEPENDENCE OF THE REACTION RATE ON THE NATURE OF THE INTERACTING SUBSTANCES AND DEGREE OF TRANSFORMATION DURING MECHANICAL MIXING. July 62 [5]p. 7 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of #Zhurn[al] Priklad[noi] Khim[ii] (USSR) 1962 [v. 35] no. 1, p. 90-[94].

DESCRIPTORS: *Stirrers, Transformations, Reaction kinetics, Sodium compounds, Hydroxides, Benzoic acids, Boric acids, Salicyclic acids, Oxalic acids, Turbine blades, *Hydrodynamics.

Tichy, V., Dusek, R., and Moudry, V.
PREPARATION OF METHYLPHENYLDIETHOXYSILANE BY A SINGLE-STEP GRIGNARD SYNTHESIS. July 62 [9]p. 66 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Chemicky Prumysl (Czechoslovakia) 1961 [v. 11(36)] no. 10, p. 509ff.

DESCRIPTORS: *Silanes, Methyl radicals, Phenyl radicals, Ethyl radicals, Synthesis, Polymers, *Metal-organic compounds, Lubricants, Synthetic rubber, *Grignard reactions.

Topchieva, K. V. and Planovskaya, I. P.
THE EFFECT OF STREAM VELOCITY AND CATALYST BED HEIGHT ON THE DEGREE OF GAS-PHASE MIXING IN A FLUIDIZED BED. July 62 [3]p. 2 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1962, v. 141, no. 3, p. 679-[682].

DESCRIPTORS: *Fluidized solids, Fluid flow, Velocity, *Cumenes, Decomposition, Benzenes, *Alumina-silica catalysts.

Swinarski, A. and Siedlewski, J.
FRACTIONATION OF ACTIVATED CARBON VIA FLUIDIZATION. July 62 [3]p. 6 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Przemysl Chemiczny (Poland) 1961, v. [17](40) no. 11, p. 651ff.

DESCRIPTORS: Adsorbents, *Activated carbon, Fractionation, *Fluidized solids, Particles, Density, Catalysts, Hydrogen compounds, Sulfides, Acids.

Vol'fkovich, S. I., Margolis, F. G., and Polyakov, N. N.
COMPLEX FERTILIZERS CONSISTING OF NITRIC ACID AND NATURALLY OCCURRING PHOSPHATES (COMPLEX FERTILIZERS BY DECOMPOSITION OF PHOSPHATE WITH NITRIC ACID) tr. by Bertha P. Klenova. 14 Dec 60, 16p. 43 refs. TVA-3881.
Order from OTS or SLA $1.60 62-24451

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1960, no. 1, p. 34-41.

DESCRIPTORS: *Fertilizers, Production, Nitric acid, *Phosphates, Decomposition, Calcium compounds, Nitrates, Carbonates, Ammonium compounds, Sulfates.

Zayarnyi, N. S.
COMPUTER MODEL FOR AMMONIA SYNTHESIS COLUMNS. July 62 [6]p. 11 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 12 [p. 850-854].

DESCRIPTORS: *Towers (Chemistry), *Computers, Models (Simulation), *Ammonia, Synthesis, Reaction kinetics, Catalysts.

Zhivaikin, L. Ya.
LIQUID FILM THICKNESS IN FILM-TYPE UNITS. July 62 [5]p. 33 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskoe] Mashinostroenie (USSR) 1961 [v. 3] no. 6, p. 25ff.

DESCRIPTORS: *Heat exchangers, *Thin films, Liquids, Fluid flow, Mass transfer, Viscosity, Density, Velocity.

Civil Engineering

STATISTICS ON THE HUNGARIAN CONSTRUCTION INDUSTRY FOR 1949-57. 15 Dec 60 [293]p.
JPRS: 6418.
Order from OTS or SLA $18.50 62-19289

Trans. of unidentified Hungarian mono. (report) pub. by the Central Bureau of Statistics, 1959/6[0].

DESCRIPTORS: *Construction, Industry, *Construction material industry, Industrial production, Labor, Economics, Statistical data, *Hungary.

Information is given on such aspects of construction as general developments in the industry, manpower, financing, mechanization and technology, production of construction materials, and figures on construction completed and in progress under the various construction programs. The publication also includes a section devoted to the definition of selected terms which have been used in the text and tables and which are frequently used in other reports on the construction industry. (Preface)

TENTATIVE INSTRUCTIONS FOR THE USE OF PRECAST CONCRETE SLABS IN ROAD CONSTRUCTION. [1962] 8p. (8 figs. omitted) 3 refs.
Order from SLA $1.10 62-18008

Trans. of unidentified German mono., Cologne, 1960 (formulated by Arbeitsgruppe Betonstrassen, Forschungsgesellschaft für das Strassenwesen E. V. (Working Group "Concrete Roads", Road Research Center)).

DESCRIPTORS: *Roads, Construction, Stresses, *Reinforced concrete, Pavements, Traffic, *Load distribution, Joints.

Okamura, S. and Murase, T.
PERFORMANCE OF OVERFLOW PIPES IN RELATION TO THE QUIET STEADY-OVERFLOW OF LIQUIDS. [1962] 9p.
Order from ATS $12.50 ATS-21P62J

Trans. of Kagaku Kogaku (Japan) 1961, v. 25, no. 12, p. 870-876.

DESCRIPTORS: *Pipes, Liquids, *Fluid flow.

Electrical and Electronic Engineering

ELECTRICAL CONNECTION BETWEEN COMMUTATOR AND WINDING OF ELECTRICAL MACHINES. [1962] 4p.
Order from K-H $5.00 K-H-4022

Trans. of Italian patent 410,106 [1946].

DESCRIPTORS: Electrical equipment, *Electrical connectors, *Commutators, Wire, Coils.

A HALL ELEMENT RECEPTACLE FOR HALL GENERATOR. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of utility model publication no. 37-25711, 25 Sep 62, by Yokogawa Electric Works, Ltd.

DESCRIPTORS: *Hall effect, *Generators, Electric connectors.

MAGNETOELECTRIC GENERATOR, ESPECIALLY FOR BICYCLE LAMPS. [1962] 14p.
Order from K-H $17.50 K-H-7061

Trans. of Danish patent 63,061 [1946] by Berko Works, Quast and Eichert, Berlin, Germany.

DESCRIPTORS: *Generators, Electromagnets, *Incandescent lamps, Vehicles.

SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF (USING CADMIUM ON GERMANIUM FACE). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14765, 21 Sep 62, by Philco Corp.

DESCRIPTORS: *Semiconductors, *Cadmium, *Germanium, Manufacturing methods.

SEMICONDUCTOR ELECTRICAL DEVICE (LOW IMPEDANCE ELEMENT FOR DIODE OR TRANSISTOR). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of utility model publication no. 37-25710, 25 Sep 62, by Sony Corp.

DESCRIPTORS: *Semiconductors, Electrical equipment, *Diodes, *Transistors, Impedance.

SINGLE OF POLYPHASE ELECTRICAL MACHINE WITH A QUADRANGULAR SHEET-PLATE STATOR UNIT HAVING DIFFERENTLY FORMED SLOTS. [1962] 7p.
Order from K-H $8.75 K-H-8288

Trans. of Dutch patent 50,563 [1942].

DESCRIPTORS: *Electrical equipment, Metal plates.

Emel'yanov, S. V. and Bermant, M. A.
CONSTRUCTION OF HIGH-QUALITY SYSTEMS OF AUTOMATIC CONTROL OF STRUCTURES WITH VARIABLE PARAMETERS. 8 Nov 62 [11]p. 3 refs. JPRS: 16104.
Order from OTS or SLA $1.10 62-33678

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 145, no. 4, p. 748-751.

DESCRIPTORS: Automatic, Control, *Control systems, Construction, Quality control, Transients, Linear systems, Equations of motion, Differential equations, Tracking.

This article is an attempt to solve the problem of constructing by taking advantage of certain features of systems of automatic control with variable structure. A possibility is considered of constructing systems of automatic control, taking into account a certain fixed sector-linear law of control, which would have the quality of transient processes slightly changed when the parameters of the structure change within a wide range. (Author)

Gaile, G.
OBSTACLES FACING TECHNICAL DESIGNERS IN USSR: THE DESIGNER AND NEW EQUIPMENT. 14 Nov 62 [10]p. JPRS: 16186.
Order from OTS or SLA $1.10 63-13075

Trans. from Izvestiya (USSR) 1962, 24 Oct, p. 4.

DESCRIPTORS: *Design, Engineering, Radio equipment, Electrical equipment, Semiconductors, Tools.

Gurevich, R. V.
ON THE SHIFTING OF THE RADIATION PATTERN OF HORIZONTALLY POLARIZED SHORT-WAVE DIRECTIONAL ANTENNAS. 14 Jan 60 [8]p. USASIA: SC-1/59; JPRS: R-211-D.
Order from OTS or SLA $1.10 62-33213

Trans. of Nachrichtentechnik (East Germany) 1955, v. 5, no. 4, p. 158-160 (originally pub. in #Vestnik Svyazi (USSR) 1954 [v. 14] no. 7[172] p. 10-12).

DESCRIPTORS: *Direction finding, *Antennas, *Antenna radiation patterns, Transmission lines, Power, Distribution, Phase shifters, Standing wave ratios.

A method of shifting the directional pattern of short-wave antennas which involves a change in the length of the lines feeding the antennas discussed. An analysis is made of the effect of an uneven power distribution between the antennas on the operation of the antenna array, if the standing-wave ratio for the distribution lines is smaller than 1. In the addendum an equation is given for the phase rotation over a feed-line segment Δ 1 for a coefficient of standing waves different from 1. (Author)

Ioffe, S. B. and Drichko, N. M.
A METHOD OF PRODUCING INTERFERENCE-POLARIZATION FILTERS. 24 Apr 62 [6]p. FTD-FTD-TT-62-287.
Order from OTS or SLA $1.10 62-24474

Unedited rough draft trans. of Soviet patent no. 135258 (663478) 16 Apr 60, 2p.

DESCRIPTORS: *Interference, *Polarization, Polarizing filters, Crystal filters, Production.

This method of preparing interference-polarization filters consisting of a number of stages each containing polarizers and intermediate crystal plates and quarter-wave plates has the following special feature: in order to compensate for errors in the thickness of the crystal plates, the stages of the filters are successively tuned to a given wavelength by orienting the polarizers relative to the crystal plates by turning them by angles proportional to the errors in the thickness of these crystal plates. (Author)

Katz, H.
ELECTRICAL DISCHARGE TUBE WITH PROVISION FOR COOLING. [1960] 4p. 5 refs. MDF K-229.
Order from OTS $0.50 62-11481

Trans. of German patent 1,019,387, appl. 15 Dec 52, by Siemens & Halske Co., pub. 14 Nov 57.

DESCRIPTORS: *Electron tubes, *Discharge tubes, Electrodes, Cooling, Electric discharges.

A grid-controlled electric discharge tube with a cooling arrangement for one or more electrodes is described, consisting of a section of the tube wall made from double-walled, ring-shaped cooling conduits of kovar or a similar material, joined together and fused into the wall of the discharge tube; it is distinguished by the fact that this cooling conduit protrudes into the discharge space. The cooling conduit also serves as support for a plane grid which is very close to the cathode, for example, a metal-capillary-cathode, which cathode, in a given case, might consist of several individual cathodes.

Kolmogorov, A. N., Mishchenko, E. F., and Pontryagin, L. S.
A PROBABILITY PROBLEM OF OPTIMAL CONTROL. 9 Nov 62 [8]p. 2 refs. JPRS: 16124.
Order from OTS or SLA $1.10 63-13078

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 145, no. 5, p. 993-995.

DESCRIPTORS: *Statistical processes, *Probability, *Control, Partial differential equations, Topology, Integrals, Green's function.

Loginova, T. F.
TUBULAR ELECTRON BEAM OF CONICAL FORM IN A "CONICAL" MAGNETIC FIELD. 5 Apr 62 [10]p. 3 refs. FTD-TT-62-147.
Order from OTS or SLA $1.10 62-24471

Unedited rough draft trans. of #Radiotekhnika i Elektronika (USSR) 1961, v. 6, no. 9, p. 1540-1544.

DESCRIPTORS: *Electron beams, Conical bodies, *Magnetic fields, Focusing, Mathematical analysis.

Calculations were made and an experimental selection of a "conical" magnetic field was realized, i.e. a field, the power lines of which are directed over the generattrix of coaxial cones with general peak. Experiments showed that with the aid of a conical magnetic field it is possible to focus a hollow electron beam of low thickness over a length of more than 100 mm. The investigation covered a beam with small convergence angle and with a current density of 0.1 to 0.4 amp/sq cm. With the aid of a conical magnetic field it is possible to realize focusing of solid converging streams with various convergence angles. In the case of greater convergence angles to create a conical magnetic field it is necessary to have rapid change in field intensity along the axis, which can be secured only with the aid of magnetic screens and tips. To focus powerful conical beams with greater current density magnetic fields of greater absolute value are required.

Lyamichev, I. Ya., Orlov, I. N. and others.
AN EXPERIMENTAL STUDY ON THE MAKING OF MULTICOMPONENT ELECTROLUMINESCENCE DEVICES USING FERROELECTRIC MATERIALS. 11 May 62 [15]p. 11 refs. FTD-TT-62-305.
Order from OTS or SLA $1.60 62-25735

Unedited rough draft trans. of #Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya, 1961, v. 25, no. 4, p. 492-500.

DESCRIPTORS: Electrical equipment, *Ferroelectric materials, Luminescence, *Fluorescent screens, *Photoconductivity, Circuits, *Image intensifiers (Electronics).

The problems are studied of making flat screens for reproducing images and flat image amplifiers (converters) using photoconductors.

Maliya, G. T.
SOLAR ENERGY RESOURCES OF THE GEORGIAN SSR. 8 Mar 62 [140]p. 48 refs. MCL-1364.
Order from OTS or SLA $10.50 62-24945

Unedited rough draft trans. of mono. Gelioenergeticheskie Resursy Gruzinskoi SSR, Tbilisi, 1959, 127p.

DESCRIPTORS: *Solar energy, Thermal radiation, Distribution, Geography, Sun, Motion, Scattering, Thermoelectricity, Electric power production, Heaters, Dehydrators, Water heaters, Refrigeration systems, Power supplies, Mirrors, Photoelectric cells, Photosynthesis, Boilers.

Contents:
Solar radiant energy and the amount of solar energy falling on certain geographical points of the Georgian SSR
Devices for registering duration of sunshine and measurement of direct and scattered solar radiation. Basic information pertaining to the apparent motion of the sun across the sky
Technical and industrial installations converting the sun's luminous energy into heat
Solar-energy districting map of the territory of the Georgian SSR on the basis of solar radiation, and an evaluation of solar energy resources
Bibliography

Mansurov, K.
A SUFFICIENT CRITERION FOR THE STABILITY OF NONLINEAR AUTOMATIC CONTROL SYSTEMS.
15 Oct 62 [7]p. 4 refs. JPRS: 15705.
Order from OTS or SLA $1.10 62-33429

Trans. of Akademiya Nauk Kazakhskoi SSR, Alma Ata. Izvestiya. [Seriya Matematiki i Mekhaniki] 1962, no. 10(14) p. 56-59.

DESCRIPTORS: *Nonlinear systems, Automatic *Control systems, Stability, Functions, Inequalities, *Equations.

Office of Technical Services, Dept. of Commerce, Washington, D. C.
SERVOMECHANISMS AND CONTROL SYSTEMS.
Aug 62, 21p. 364 refs. OTS Selective Bibliography SB-499.
Order from OTS $0.10 OTS SB-499

DESCRIPTORS: *Bibliography, *Servomechanisms, *Control systems, Remote control systems, Synchros, Automatic pilots, Computers.

This bibliography lists 364 reports and translations on servomechanisms, servo systems, control systems, automatic pilots and synchros. Computer control, with a few exceptions, is not included since it is covered in another bibliography. The reports include design, construction and applications of the various control systems. (Author)

Ogoshi, Akio and Sumiyoshi, Hiroji.
A METHOD OF SEALING A SEMICONDUCTOR DEVICE IN A GLASS ENCLOSURE. [1 Sep 61] [4]p. (foreign text included).
Order from OTS or SLA $1.10 62-16322

Trans. of published Japanese patent SHO 36-13873, 19 Aug 61, application no. SHO 34-3381, 2 Feb 59, by Sony Corp.
Another trans. is available from WBI, 1 Sep 61.

DESCRIPTORS: *Semiconductors, Encapsulation, Seals, Glass, Particles, *Boric acid, Anhydrides.

Panfilov, N. A.
ELECTROMAGNETIC CALCULATIONS OF DIRECT CURRENT MACHINES TAKING INTO ACCOUNT THE COOLING OF THE WINDINGS, tr. by J. K. Skwirzynski.
Apr 61 [13]p. 2 refs. NLL M. 3322.
Order from OTS or SLA $1.60 62-24660

Trans. of Elektrichestvo (USSR) 1960, no. 5, p. 50-53.

DESCRIPTORS: *Direct current, *Electric machinery, Armature coils, *Wire-winding machines, Rotation, Velocity, *Cooling, Armatures, Heat transfer, Thermal conductivity, Temperature, Power, Voltage, Excitation, *Electromagnetic theory

The product $AS \cdot j_A$ can be used as a criterion for the estimation of power or of over-heating of the armature winding of only these DC machines, whose flux, corresponding to the saturated condition of the magnetic system, is approximately equal to its optimal value. To this group belong the majority of machines working under open or covered conditions with the rotation velocity of the order of 1000 rev/min or lower. In the majority cases of machines working under covered conditions with rotation velocities from 1500 rev/min and higher, and sometimes in high speed machines working under protected conditions, the product $AS \cdot j_A$ should not be used to estimate the power of a machine or the overheating of the armature winding. The winding parameters of these machines should be estimated at optimal values of the magnetic flux. (Author)

Panzer, S.
THE ELECTRON BEAM AS A HEAT SOURCE FOR WELDING AND EROSION. [1962] 22p. (figs. omitted) 18 refs.
Order from SLA $2.60 62-16237

Trans. of Elektronische Rundschau (Germany) 1961, v. 15, no. 12, p. 567-573.

DESCRIPTORS: *Erosion, *Welding, Heat, Sources, *Electron beams, Machines, Control.

When a high-density electron beam is focused for smallest beam cross section, the deceleration of the high-velocity electrons at the point of impact yields a power density up to 10^9 Wcm^{-2} causing the material hit to be molten or vaporized. Such an electron beam is a miniature heat source permitting welding, cutting, or drilling of the work. A brief discussion of the physical arrangement and the electron-optical details is followed by a description of the constructional details of machinery for material working by electron beams and of electronic controls for them. (Author)

Ponstein, A. C.
THE ELECTRON PRIZE TRANSMITTER (De Electron Wisselprijszender) tr. by Mrs. A. P. Lagerwerff.
[1959] 3p. (1 chart 1 diagr. omitted). H-4109 C.
Order from OTS or SLA $1.10 59-21172

Trans. of Electron (Netherlands) 1955 [v. 10] p. 232.

DESCRIPTORS: Electronic equipment, *Radar transmitters, Design.

Schlenzig, K.
VIEWPOINTS ON THE DECREASING OF THE VOLUME OF DEVICES CONTAINING CLASSICAL COMPONENTS. 7 Nov 62 [10]p. 9 refs. JPRS: 16075.
Order from OTS or SLA $1.10 62-33686

Trans. of Nachrichtentechnik (East Germany) 1962, v. 12, no. 7, p. 248-250.

DESCRIPTORS: *Electronic equipment, Miniature electronic equipment, Subminiature electronic equipment, Design, Production, Maintenance, Frequency, Temperature, Costs, Monitors.

The drive toward miniaturization has led, among other things, to micromodule systems and solid assemblies. Despite these developments, however, classical components will have their justification for some time yet to come. The following contribution

proposes to treat some general problems which are brought about by the parallel course of these developments. (Author)

Sobolev, G. L.
A METHOD OF MEASURING THE ELECTRONIC FRE QUENCY DRIFT OF PULSED MAGNETRONS. 5 Apr 62 [4]p. FTD-TT-62-11.
Order from OTS or SLA $1.10 62-24269

Unedited rough draft trans. of Soviet patent no. 140501, 25 Nov 58.

DESCRIPTORS: *Magnetrons, *Frequency modulation, Modulation, Drift, Pulse modulation, Amplitude modulation, Measurement, Oscillators, Modulators.

This method of measuring the electronic frequency drift of pulsed magnetrons differs from other methods in that, in order to compensate for thermal frequency drift in the magnetron, the pulses are amplitude modulated by a low-frequency sinusoidal voltage by connecting an additional source in series with the modulator rectifier; in order to synchronize the pulse repetition rate of the modulator and the sinusoidal modulating voltage, the latter triggers a blocking oscillator twice per sine-wave cycle. The blocking oscillator has an artificial line and its pulses trigger the pulse modulator. (Author)

Wagner, Howard A.
A SEMICONDUCTOR DEVICE: [SEMICONDUCTOR ELEMENTS ENCAPSULATION WITHOUT USING GLASS OR OTHER FRAGILE MATERIAL]. [10 Oct 61] [4]p. (figs. omitted).
Order from OTS or SLA $1.10 62-16321

Trans. of published Japanese patent SHO 36-15207, 4 Sep 61, application no. SHO 34-28941, 12 Sep 59, by Westinghouse Electric Corp., USA (Priority: USA, 25 Sep 58).
Another trans. is available from WBI, 10 Oct 61.

DESCRIPTORS: *Semiconductors, Encapsulation, Containers, Seals, Electric conectors, Manufacturing methods.

Yantovskii, E. I.
A WORKING SUBSTANCE FOR MAGNETOHYDRODYNAMIC ELECTRIC MACHINES [Rabochee Telodlya Magnitogazodinamicheskikh Elektricheskikh Mashin]. 17 Apr 62 [4]p. FTD-TT-62-227.
Order from OTS or SLA $1.10 62-24473

Unedited rough draft trans. of Soviet patent 128950 [cl. 21g, 35] 7 Sep 59 [638380/24].
Another unedited rough draft trans. of this patent in #Byulleten' Izobretenii (USSR) 1960, no. 11, p. 31, is available from OTS or SLA $1.10 as 61-23839, MCL-918, 2 May 61 [2]p.

DESCRIPTORS: *Magnetohydrodynamics, *Electric machinery, Electric motors, Synchros, Operation, *Neon, *Cesium, *Vapors, mixtures, *Electrical conductance.

Mechanical Engineering

Bönecke, H.
THEORETICAL CONSIDERATIONS, MODEL EXPERIMENTS AND OPERATIONAL EXPERIENCES ON THE FLOW PHENOMENA IN SOAKING PITS (WITH DISCUSSION). Oct 62.
Order from BISI £6 15s BISI-2965

Trans. of Stahl und Eisen (West Germany) 1962, v. 82 [no. 15] p. 1009-1017.

DESCRIPTORS: *Furnaces, Jets, Gas flow, Models (Simulation).

Nikolaev, G. V.
COMPARATIVE DATA FOR VALUES OF EXPERIMENTAL HEAT TRANSFER COEFFICIENTS IN CONDENSERS. [1962] [11]p. 7 refs. NLL M. 3541.
Order from OTS or SLA $1.60 62-24643

Trans. of Energomash[inostroenie] (USSR) 1961, v. 7, no. 1, p. 15-18.

DESCRIPTORS: *Steam condensers, *Heat transfer, Steam, Pressure, Temperature, Thermal conductivity, *Lubricating oil deaerators, Boiler tubes, *Turbines.

Ordnance, Missiles, and Satellite Vehicles

UNPRECEDENTED TANDEM FLIGHT IN SPACE (PRINCIPAL RESULTS). 6 Nov 62 [20]p. (photo omitted). JPRS: 16054.
Order from OTS or SLA $2.60 62-33719

Trans. from Pravda, Moscow (USSR) 1962, no. 295 (16151) 22 Oct p. 1-3.

DESCRIPTORS: *Space flight, *Satellite vehicle research, Space ships, Control systems, Telemeter systems, Radio-communication systems, Radiation hazards, *Space medicine, Astronauts.

Gubarev, V.
SOVIET INTERPLANETARY ROCKET TO MARS. 5 Dec 62 [15]p. JPRS: 16523.
Order from OTS or SLA $1.60 63-13273

Trans. from Komsomol'skaya Pravda (USSR) 1962, 2-4 Nov.

DESCRIPTORS: *Space probes, Rockets, *Mars, *Space communication systems, *Radio equipment, Antennas, Radio signals, Laboratories, Underground structures.

Contents:
Rocket on the launching pad - "cosmic earphones" aiming the antennas - the "artificial marvel"
Here they are waiting for signals from outer space (description of an underground laboratory)
First period of cosmic radio communication.

Moskalenko, K. S.
ROCKET TROOPS GUARD THE SAFETY OF THE MOTHERLAND. 7 Feb 62 [9]p. FTD-TT-62-184; SC-1025; ASTAR 2842.
Order from OTS or SLA $1.10 62-24279

Unedited rough draft trans. from Krasnaya Zvezda (USSR) 1961, 13 Sep, p. 3.

DESCRIPTORS: *National defense, *Military personnel, Weapons, *Rockets, *Nuclear warheads, Warheads, *Guided missiles.

Novikov, M. and Krysov, A.
THE ROCKET-GUNNERS FROM THE CRUISER "DZERZHINSKII". 1 Mar 62 [8]p. FTD-TT-62-247.
Order from OTS or SLA $1.10 62-24950

Unedited rough draft trans. from Krasnaya Zvezda (USSR) 1961, no. 32(11637) p. 2.

DESCRIPTORS: *Cruisers, *Rocket launchers, *Gunnery, *Guided missile personnel, Personnel, Rockets, Launching.

Petrovich, G.
SOVIET DEVELOPMENT OF SPACE TRAVEL. 14 Nov 62 [10]p. JPRS: 16187.
Order from OTS or SLA $1.10 63-13076

Trans. of Aviatsiya i Kosmonavtika (USSR) 1962 [v. 44] no. 6, p. 8-12.

DESCRIPTORS: Astronautics, *Space flight, *Satellite vehicles, Launching, Satellite vehicle research.

Sarkozy, Geza.
ROLE OF RADIO ELECTRONICS IN SOVIET SPACE EXPLORATION. 25 Sep 62 [12]p. JPRS: 15430.
Order from OTS or SLA $1.60 62-33132

Trans. of Hiradastechnika (Hungary) 1962, v. 13, no. 2, p. 70-74.

DESCRIPTORS: *Satellite vehicles, *Radio equipment, Electronic equipment, *Remote control systems, Control systems, Design, Astronautics.

An outline is provided of the design principles applied and a brief description of several of the more important details which made precise orbiting and attainment of target trajectory by the Soviet space rockets and space ships. (Author)

Varvarov, Nikolai.
AN ASTROLINER STARTS FROM THE COSMOS. 3 Apr 62 [11]p. FTD-TT-62-422.
Order from OTS or SLA $1.60 62-24917

Unedited rough draft trans. from Ekonomicheskaya Gazeta (USSR) 1962 [no. 1(22)] p. 34.

DESCRIPTORS: *Space flight, Astronautics, Spaceships, *Satellite vehicles, Satellite vehicle trajectories, Rockets, Launching.

Sanitation and Safety Engineering

Bylev, B. V.
ICE PRESSURE ON SLOPED ICE APRONS. [1962] 22p.
Order from ATS $32.50 ATS-99P61R

Trans. of Moskovskii Institut Inzhenerov Zheleznodorozhnogo Transporta. Trudy (USSR) 1950, v. 74, p. 334-356.

DESCRIPTORS: *Ice, *Pressure, Hangars.

Nekrasovskii, A. Ya. and Starokol'tsev, V. I.
INSTRUMENT FOR CHECKING CONDENSOR EXPLODERS (Pribor dlya Ispytaniya Vzryvnykh Kondensaternykh Mashinok) tr. by F. M. Janus. July 61 [4]p. (foreign text included). S.M.R.E. Trans. no. 4542; NLL M. 3435.
Order from OTS or SLA $1.10 62-24845

Trans. of Ugol' Ukrainy (USSR) 1961, v. 5, no. 5, p. 34.

DESCRIPTORS: *Exploder mechanisms, *Detonators, *Capacitors, Electrical equipment, Instrumentation, Mines, Automation.

FOOD, HANDLING, AND PACKAGING EQUIPMENT

Food

ADVANCES IN THE FIELD OF THE METHODOLOGY OF STABILIZATION OF FOOD ARTICLES (Postepy w Dziedzinie Metodyki Utrwalania Zywnosci) tr. by Claudius F. Mayer. Sep 59, 3p. H 4682.
Order from OTS or SLA $1.10 60-13692

Trans. of Przeglad Zbozowo-Mlynarski (Poland) 1959, v. 3, no. 5, p. 145.

DESCRIPTORS: *Preservation, *Food, *Cereals, *Flour.

FROM THE SCIENTIFIC-TECHNICAL CONGRESS; ADVANCES IN THE FIELD OF THE METHODOLOGY OF STABILIZATION OF FOOD ARTICLES (Ze Zjazdu Naukowo-technicznego; Postepy w Dziedzinie Metodyki Utrwalania Zywnosci) tr. by Claudius F. Mayer. Sep 59 [7]p. H 4684.
Order from OTS or SLA $1.10 60-13006

Trans. of Przeglad Zbozowo-Mlynarski (Poland) 1959, v. 3, no. 6, p. 171-173.

DESCRIPTORS: *Preservation, *Food, *Cereals, *Flour, Dehydration, Electric currents, High frequency.

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

DEVICE FOR SYNCHRONIZING THE MOVEMENT OF TWO OR MORE HYDRAULIC AUXILIARY MOTORS WITH IRREVERSIBLE SCREWS. [1962] 3p.
Order from K-H $3.75 K-H-4047

Trans. of Italian patent 405,361 [1945].

DESCRIPTORS: *Hydraulic power systems, *Synchros, Metal screws.

HYDRAULIC AUXILIARY DEVICE WITH IRREVERSIBLE SCREW. [1962] 5p.
Order from K-H $6.25 K-H-5185

Trans. of Italian patent 389,980, Nov 41.

DESCRIPTORS: *Hydraulic systems, Metal screws.

Dedek, Vladimir.
THE INFLUENCE OF THE EXTENT OF THE DEPTH OF THE PIERCING AXIS BELOW THE DISC AXES IN A STIEFEL PIERCING MILL ON THE POSSIBLE FORMATION OF EXTERNAL SPIRAL DEFECTS DURING ROLLING. [1960] [24]p. 19 refs.
Order from SLA $2.60 62-14174

Trans. of Hutnicke Listy (Czechoslovakia) 1958, v. 13, no. 10, p. 882-892.
Another trans. is available from BISI £8 10s as BISI-1506 [1960].

DESCRIPTORS: *Reamers, Tests, *Steel, Deformation, Resistance, Pipes, Production

For abstract see Technical Translations 3: 663, 1960.

Dobrozrakov, D. V.
GROUP PROCESSING IN THE VORONEZH MACHINE CONSTRUCTION PLANT. 31 Oct 61 [7]p. (1 fig. omitted). FTD-TT-61-9.
Order from OTS or SLA $1.10 62-15372

Trans. of mono. Gruppovaya Tekhnologiya v Mashinostroenii i Priborostroenii, n.p., 1960, p. 114-116.

DESCRIPTORS: Industrial plants, *Machines, Construction, *Industrial production, Economics.

Ernst, H.
475 TONNE LADLE HANDLING CRANE OF NEW DESIGN AND LOW WEIGHT. Nov 62.
Order from BISI £3 10s BISI-2991

Trans. of Stahl und Eisen (West Germany) 1962, v. 82 [no. 9] p. 513-517.

DESCRIPTORS: *Hoists, Operation, Specifications.

Herrman, G., ed.
FRICTION AND WEAR IN MACHINERY. June/July 62, 263p.
Order from American Society of Mechanical Engineers, 29 W. 39th St., New York, 18, N. Y.

Trans. of Trenie i Iznos v Mashinakh (USSR) 1959, v. 13.

DESCRIPTORS: *Machines, Friction, Lubrication, Bearings, Mechanical properties, Deterioration.

Contains articles by A. A. Soroko-Novitskaya, L. E. Val'dma, G. A. Tashkinov, L. V. Elin, E. V. Lyalin, V. N. Marochkin, E. F. Zommer, I. B. Khrisanova, E. O. Vil'dt.

Stöter, Jochen.
THE FORGING PROCESS ON HAMMERS AND PRESSES WITH PARTICULAR REFERENCE TO RISING (DIE FILLING). [1960] [19]p. 12 refs.
Order from SLA $1.60 62-16861

Trans. of Werkstattstechnik [und Maschinenbau] (Germany) 1959 [v. 49] no. 4, p. 223-230.
Another trans. is available from BISI £5 15s as BISI-1650 [1960].

DESCRIPTORS: *Dies, Forging, Machining, Machine tools, Deformation, Stresses, Hammers, Metal forming presses.

Engines and Propulsion Systems

MOTOR FACTORY TORPEDO-RIJEKA (Tvornica Motora "Torpedo" Rijeka) tr. by Rigby. [1959] 4p. (1 table, 2 illus. omitted). H-2222 B.
Order from OTS or SLA $1.10 59-21077

Trans. of Tehnika (Yugoslavia) 1958 [v. 2] 1 May, p. OB81-OB83.

DESCRIPTORS: *Diesel engines, Production, Design, *Marine engines, *Electric motors, Tractors, Commerce.

SOVIET PROGRESS IN THE DEVELOPMENT OF FREE-PISTON GAS GENERATORS. 30 July 62, 3p.
AID rept. 62-109.
Order from OTS or SLA $1.10 62-32429

Review of Izvestiya Vysshikh Uchebnykh Zavedenii. Mashinostroenie (USSR) 1962, no. 1, p. 7-13 and 95-10

DESCRIPTORS: *Gas generator engines, Pistons, Scientific research, Propulsion.

Contents:
Development of free-piston gas generators, by A. S. Orlin
The work of the TsNIDI [Central Scientific Research Diesel Institute] in the field of free-piston gas engine installations
Testing and perfecting an experimental model of a free-piston gas generator, by V. S. Titarenko.

Barlit, V. V.
ANALYSIS OF A UNIQUE MIXED FLOW TURBINE: CALCULATIONS AND INVESTIGATION OF MODEL RUNNERS. [1962] [10]p. 2 refs. NLL M. 3537.
Order from OTS or SLA $1.10 62-24631

Trans. of Izv[estiya] Vyssh[ikh] Ucheb[nykh] Zaved[enii]. Energetika (USSR) 1958 [v. 1] no. 5, p. 100-108.

DESCRIPTORS: Water, *Turbines, Design, Operation, Model tests, Hydrodynamics, Cavitation, Turbine blades, Cylindrical bodies, Bodies of revolution, Conformal mapping.

Four model runners were studied. Their blades were profiled by the Bauersfeld method and by conformal projection on the stream surface of revolution. For comparison, a modified wheel RO-82 LMZ was manufactured. It performed well, at optimum, at given design parameters. All five models were tested on a vertical assembly with a bent draft tube, at the Kharkhov Polytechnic Institute. True meridional stream appears rotational. Magnitude and sense of the vorticity depend on the angle $\Delta\chi$ and direction of bending of blade edges. Runner models F320(I) and F320(II) with non-radial edges had fairly good values of efficiency and σ, and low tendency to vortex formation. The distribution of the moment of momentum at inlet and outlet from the runner was derived from the experimental data. This irregularity of circulation depends on the configuration of the runner blades and geometrical parameters of the guide vanes. Models calculated by the conformal method had good characteristics. This method is recommended for blade profile design on mixed flow water turbines.

Gorin, Yu. A.
A SIGNAL INDICATOR FOR FLAMEOUT IN THE COMBUSTION CHAMBER OF A TURBOJET. 24 Apr 62 [4]p. FTD-TT-62-288.
Order from OTS or SLA $1.10 62-24475

Unedited rough draft trans. of Soviet patent no. 135309 (658619/25) 14 Mar 60.

DESCRIPTORS: *Turbojet engines, Airplane engines, *Combustion chambers, *Flames, Flame propagation, Signal lights, Indicator lights, Labeled substances, Radioactive isotopes.

This signal indicator of flameout in the combustion chamber of a turbojet engine, consisting of a sensor, an amplifier, and a signal light or a starting relay, has the following special feature: in order to increase the speed and independence of signalling on external flight conditions, it utilizes a sensor with a radioactive substance and an ionization chamber; this sensor reacts to a change in the ratio of the gas density in the combustion chamber prior to flameout to that after flameout. (Author)

Kolomytsev, P. T. [Samgin, A. A., and Snetkov, A. Ya.].
STRUCTURE AND COMPOSITION OF SURFACE LAYERS OF GAS-TURBINE BLADES. Sep 62.
Order from HB $2.80 HB-5486

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 9, p. 7-11. Another trans. is available from OTS or SLA $1.10 as 61-27632, DSIR LLU M. 3218, Feb 61 [7]p.

DESCRIPTORS: *Gas turbine blades, Materials, Surfaces, Spectrographic analysis, X-ray diffraction analysis, Microstructure, Hardness, Fracture (Mechanics), Lattices, Heat resistant alloys, Nickel, Chromium, Titanium, Aluminum, Alloys, Failure (Mechanics).

For abstract see Technical Translations 6:852, 1961.

Machine Parts and Mechanisms

CENTRIFUGAL GOVERNOR WITH SERVOMOTOR. [1962] 7p.
Order from K-H $8.75 K-H-3105

Trans. of Dutch patent 57,814 [1945].

DESCRIPTORS: *Speed regulators, Control systems, *Servo motors.

CRANK DRIVE FOR THE OBTENTION OF A BACK AND FORTH ROTATING MOTION BY MEANS OF A DRIVE ROD SUSPENDED IN A HANGER, WITH A SPECIAL CONNECTION FROM THE DRIVE ROD TO THE CRANK WHICH IS TO BE ROTATED BACK AND FORTH. [1962] 3p.
Order from K-H $3.75 K-H-5360

Trans. of Dutch patent 13,521, n.d.

DESCRIPTORS: *Crankshafts, *Connecting rods, Rotation, Machines.

VALVES AND VALVE SYSTEMS WITH BINARY DIGITAL CONTROL. [1962] 12p.
Order from ATS $13.25 ATS-58P64F

Trans. of French patent 1,209,273, filed 21 May 59 (main patent filed 19 July 58) granted 26 June 61.

DESCRIPTORS: *Valves, Control, *Control systems, Digital systems.

Chernousov, N. P.
CERTAIN PROBLEMS IN THE THEORY OF HYDROSTATIC RADIAL BEARINGS. 11 May 62 [18]p. 11 refs. FTD-TT-62-335.
Order from OTS or SLA $1.60 62-25740

Unedited rough draft trans. of Khimicheskoe Mashinostroenie, 1961, [v. 3] no. 2, p. 17-22.

DESCRIPTORS: *Thrust bearings, Ball bearings, Bearings, *Hydrostatics, Pressure, *Fluid flow, Hydrostatic pressure, Theory.

Kadirov, N. B.
SOME PROBLEMS IN THE KINEMATICS OF THE TRICONE BIT. [1962] 7p.
Order from ATS $8.25 ATS-65P63R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft' i Gaz (USSR) 1962, v. 5, no. 5, p. 45-51.

DESCRIPTORS: *Drills, Mechanics, Drilling machines, Cutting tools, Tools.

Manufacturing Equipment and Processes

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET REGIONAL ECONOMY NO. 12. 5 July 62 [31]p. JPRS: 14377.
Order from OTS or SLA $3.60 63-13117

Trans. of Nauchno-Tekhnicheskie Obshchestva SSSR, 1962, [v. 4, no. 4] p. 43-44; and Narodnoe Khozyaistvo Kazakhstana (USSR) 1962 [v. 20] no. 1, p. 25-34.

DESCRIPTORS: *Industry, *Industrial production, Economics, Automation, Machines, Metallurgy, Industrial equipment.

Contents:
Auxiliary operations should be mechanized, by I. Sheboldashev
Outlook for the development of industry in Tselinnyi Krai, by B. Dvoskin and I. Sidorov.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET REGIONAL ECONOMY NO. 13. 12 July 62 [44]p. JPRS: 14442.
Order from OTS or SLA $4.60 62-32010

Trans. of [Ispolnitel'nyi Komitet] Moscow (USSR) 1962, no. 4, p. 19-20; #Voprosy Ekonomiki (USSR) 1962, no. 1, p. 30-38; and from Standartizatsiya (USSR) 1962 [v. 26] no. 4.

DESCRIPTORS: *Industry, *Industrial production, Economics, Automation, Standardization, *Machines, Construction, *Industrial equipment, Communism, Growth.

Contents:
Results of Socialist competition by industrial enterprises and construction organizations for fourth quarter of 1961 examined by Moskovskaya oblast executive committee and presidium of Moskovskaya oblast council of trade unions
Standardization and normalization in the enterprises by Leningradskii sovnarkhoz, by R. A. Reznikov
The task of heavy machine-building during the period of building of a material-technical base of Communism, by K. Vinogradov.

Bisk, Matvei Borisovich.
REASONED TECHNOLOGY OF MANUFACTURING TUBE-DRAWING MACHINERY. CHAP. III: TUBE DRAWING TOOLS BUILT OF METALLOCERAMIC ALLOYS. 21 Feb 62 [28]p. (21 figs. omitted). FTD-TT-61-333.
Order from OTS or SLA $2.60 62-23682

Unedited rough draft trans. of mono. Ratsional'naya Tekhnologiya Trubovolochil'nogo Instrumenta, Sverdlovsk, 1960, p. 37-49 and 52-65.

DESCRIPTORS: *Drawing (Machine processing), *Dies, *Machine tools, Manufacturing methods, Powder metallurgy, Surfaces, Electrolytic polishing, Abrasives, Ultrasonics, Spark machining, Grinders, *Tungsten compounds, *Carbides, Production, Sintering, Ceramic materials, Alloys, Metallurgy.

Technology of producing tungsten carbides by the sintering of powders. New methods of surface treatment: electrolytic, electro-abrasive, ultrasonic, sparking are used in addition to mechanical grinding.

Haferkamp, H.
WELDED AND EXPANDED JOINTS FOR HIGH PRESSURE PRE-HEATERS (Schweiss-Walz-Verbindungen an Hochdruck-Vorwärmern). [1960] [8]p. (foreign text included)
Order from SLA $1.10 62-16851

Trans. of V[ereinigung der] G[rosskessel]b[esitzer], Mitteilungen (West Germany) 1959, no. 62, p. 365-367. Another trans. is available from BISI £ 2 15s as BISI-1622 [1962].

DESCRIPTORS: *Heaters, Production, *Pipes, Welding, *Welded joints.

For abstract see Technical Translations 4: 42, 1960.

Kyzmak, E.
WELDING WITH COATED ELECTRODES. [1960] 22p. (figs. tables omitted).
Order from OTS or SLA $2.60 60-18956

Trans. of Vestnik Metalloprom[yshlennosti] (USSR) 1938, no. 7, p. 91-107; no. 8/9, p. 59-109.

DESCRIPTORS: Welding, *Electric welding, *Electrodes, Coatings, Physical properties, Slags, Refractory coatings, Viscosity, Ionization, Carbohydrates, Welded joints.

Mitrofanov, S. P.
PROBLEMS IN MECHANIZATION AND AUTOMATION UNDER SERIES MANUFACTURING CONDITIONS. 24 Oct 61 [30]p. MCL-1397; AD-266 772.
Order from OTS or SLA $2.60 62-32345

Unedited rough draft trans. of Feingeräte Technik (Germany) 1961 [v. 10] no. 5, p. 199-209.

DESCRIPTORS: *Manufacturing methods, *Automation, Industrial production, Industrial equipment, Machines.

Pawelski, O. and Lueg, W.
THE ELASTIC-PLASTIC BENDING OF ROUND BARS AND ITS APPLICATION TO STRAIGHTENING IN THREE-ROLL STRAIGHTENING MACHINES. Nov 62.
Order from BISI £7 BISI-2984

Trans. of Stahl und Eisen (West Germany) 1959, v. 79 [no. 25] p. 1852-1862.

DESCRIPTORS: *Rods, Elasticity, Plasticity, Mathematical analysis, *Rolling mills.

Weyel, Arthur, Rabel, Georg, and Bonner, Heinrich.
THE PRODUCTION OF POWER AND BLAST IN THE TOP GAS POWER PLANT OF AN IRON AND STEELWORKS BY MEANS OF A 14 M W GAS TURBINE. [1960] [18]p. 2 refs.
Order from SLA $1.60 62-16846

Trans. of Stahl u[nd] Eisen (West Germany) 1959, v. 79, no. 21, p. 1471-1478 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-279).
Another trans. is available from BISI £6 5s as BISI-1493 [1960].

DESCRIPTORS: *Iron industry, *Steel industry, *Gas turbines, *Power plants, Industrial equipment.

For abstract see Technical Translations 4:43, 1960

Transport, Traction and Hoist Facilities

Dem'yanyuk, F. S.
THE TECHNOLOGICAL PRINCIPLES OF FLOW-LINE AND AUTOMATED PRODUCTION, tr. by O. Blunn. June/July 62, 878p.
Order from PP $25.00

Trans. of mono. [Tekhnologicheskie Osnovy Potochnogo i Avtomatizirovannogo Proizvodstva, Moscow, 1958, 693p.].

DESCRIPTORS: *Automotive industry, Industry, *Industrial production, Automation.

Hozman, V.
THE TYPE-1435 BO' BO' 750 DIESEL-ELECTRIC LOCOMOTIVE (Motorova Lokomotiva Typu 1435 Bo' Bo' 750 (CSD Osnaceni T 435_0) s Elektrickym Prenosem Vykonu). [1962] [10]p. (figs. omitted). H-8769; JPRS (R-1573-D).
Order from OTS or SLA $1.10 62-25199

Trans. of Strojirenstvi (Czechoslovakia) 1959, v. 9, no. 4, p. 303-308.

DESCRIPTORS: *Locomotives, Diesel engines, Electric motors, Design, Construction, Specifications.

Detailed information is given on the construction and operation parameters of the new diesel-electric locomotive built by the CKD Works in Prague. The choice of the principal construction concepts of the main parts of the locomotive was determined by operational requirements. The results of test runs demonstrated that the newly built locomotive has highly satisfactory characteristics. The new locomotive will become the basis for the production of a line of locomotives varying in type according to their output. Future changes and improvements will depend on the results of further trial runs and operation. (Author)

Jedraszko, Zbigniew and Pawlowski, Janusz.
THE STAR 21 TRUCK. A. THE "SAN" MEDIUM CAPACITY UNITARY BUS. B. (A. Samochód Star 21. B. Autobus Samonósny Sredniej Pojemnósci "SAN") tr. by Hutcheson. [1958] [15]p. (15 figs. omitted). H-1779 A-B.
Order from OTS or SLA $1.60 59-11286

Trans. of Technika Motoryzacyjna (Poland) 1957 [v. 7] no. 6, p. 197-199 and 199-203.

DESCRIPTORS: *Automotive industry, *Cargo vehicles, *Passenger vehicles, Production, Design, Fuel consumption

MATERIALS

HOW TO TRANSPORT CEMENT (Jak Przewozic Cement) tr. by Chester Klimczak. [1962] [7]p. H-3380.
Order from OTS or SLA $1.10 62-25222

Trans. of Motoryzacja (Poland) [1958, v. 14, no. 11] p. 265-266.

DESCRIPTORS: *Cements, Railroads, *Transportation, Cargo vehicles, Economics

Dutron, R.
THE RILEM-CEMBUREAU METHOD FOR TESTING THE STRENGTH OF CEMENT. [1960] [17]p. 5 refs.
Order from SLA $1.60 62-16875

Trans. of Zement-Kalk-Gips (West Germany) 1960 [v. 13] no. 2, p. 64-70.
Another trans. is available from BISI £3 10s as BISI-1722 [1960].

DESCRIPTORS: *Cements, Test methods.

For abstract see Technical Translations 4: 140, 1960.

Frenz, G.
ANALYTICAL DIFFERENTIATION BETWEEN TAR PITCH AND BITUMEN. 14 Nov 62, 100 words.
Order from TTIS $9.00 TTIS 2419

Trans. of Farbe und Lack (West Germany) 1962, v. 68 [no. 9] p. 613-615.

DESCRIPTORS: *Tar, *Pitch, *Bitumens, Analysis.

Keil, F. and Mathieu, H.
THE TESTING OF CEMENT BY THE RILEM-CEM METHOD. [1960] [23]p.
Order from SLA $2.60 62-16874

Trans. of Zement-Kalk-Gips (West Germany) 1960 [v. 13] no. 2, p. 70-78.
Another trans. is available from BISI £ 4 10s as BISI-1723 [1960].

DESCRIPTORS: *Cements, Test methods.

For abstract see Technical Translations 4: 105, 1960.

Kramer, J.
INVESTIGATIONS ON CEMENT AND CONCRETE WITH EXO-ELECTRONS AFTER EXPOSURE TO X-RAYS. [1960] [21]p. 13 refs.
Order from SLA $2.60 62-16871

Trans. of Zement-Kalk-Gips (West Germany) 1960 [v. 13] no. 3, p. 111-118.
Another trans. is available from BISI £5 5s as BISI-1707 [1960].

DESCRIPTORS: *Cements, *Concrete, Test methods.

For abstract see Technical Translations 4:167, 1960

Losev, V. P. and Kazakov, M. V.
DEVELOPMENT OF A METHOD FOR THE DETERMINATION OF EXPANSION AND STABILITY OF FOAM MADE OF FOAM FORMERS "PO-1" AND "PO-6" (Razrabotka Metodiki Opredeleniya Ustoichivosti i Kratnosti Peny iz Penoobrazovatelei "PO-1" i "PO-6") tr. by A. Pingell. 18 Oct 62, 15p. 12 refs. N R L Trans. no. 914.
Order from OTS $0.50 63-11500

Trans. of mono. Novye Sposoby i Sredstva Tusheniya Plameni Nefteproduktov: Sbornik Statei (New Methods and Means of Extinguishing Flames of Petroleum Products: Collection of Articles) Moscow, 1960, p. 125-134.

DESCRIPTORS: *Fire extinguishers, Fire resistant coatings, *Foams, Stability, Standards, Test equipment.

An apparatus is proposed for preparing air-mechanical foam. On the basis of the apparatus proposed, a new laboratory method has been developed for determining the expansion and stability of foam prepared with foam formers "PO-1" and "PO-6". It has been determined that the quality characteristics of the foam obtained from a 2% aqueous solution of "PO-1", according to the new method, are represented by the following indices: a) expansion of not less than 6, and b) stability, while 50% of the liquid is drained off, of not less than 8 min. It also has been established that the quality characteristics of the foam prepared with a 4% aqueous solution of "PO-6" according to the new method, are expressed by the following indices: a) expansion of not less than 4 and b) stability, while 50% of the liquid is drained off from the foam, of not less than 15 min. (Author)

Office of Technical Services, Dept. of Commerce, Washington, D. C.
CONCRETE AND CEMENTS. July 62, 26p. 482 refs.
OTS Selective Bibliography SB-502.
Order from OTS $0.10 OTS SB-502

DESCRIPTORS: *Bibliography, *Concrete, Reinforced concrete, *Cements, Materials.

Lists 482 reports and translations added to the OTS collection during the period 1940 to July 1962. Covers research on light weight aggregates, cellular and air entrained concrete, precast and prestressed concrete, glass-fiber reinforced, steel-reinforced, soil cement mixtures, concrete pavements, concrete for nuclear radiation shielding, fire and heat resistance tests, and nondestructive testing among other subjects. (Author)

Prihoda, E. and Prihodova, M.
LIQUID GOLD WITH IMPROVED ADHESION FOR DECORATING GLASS AND CERAMICS. [1962] 7p.
Order from ATS $10.00 ATS-43P64C

Trans. of Czechoslovakian patent 98,797, filed 12 Feb 59, valid from 12 Feb 59, opened for public inspection 15 Sep 60, issued 15 Mar 61.

DESCRIPTORS: Liquid metals, *Gold, Adhesion, *Glass, *Ceramic materials.

Adhesives and Sealants

Kaliske, G.
PRESENT STATUS OF ADHESIVE BONDING OF METALS. [1962] 10p. (1 formula figs. refs. omitted).
Order from SLA $1.10 62-16956

Trans. of Aluminium (Germany) [1955] v. 31, no. 4, p. 151-156.

DESCRIPTORS: *Metals, *Bonding, *Adhesives, Bonded joints, Cements, Stresses, Corrosion, Tensile properties, Fatigue (Mechanics), Metal seals

Nio, Masayoshi and Kanematsu, Noboru
A SIMPLIFIED METHOD OF PRODUCING A MOISTURE-PROOF ADHESIVE FOR CIGARETTES. [1958] 4p. MDF N-105.
Order from OTS $0.50 62-11626

Trans. of Japanese patent, Appl. no. Sho-26-1086, pub. no. Sho-27-4738, 14 Nov 52.

DESCRIPTORS: *Cigarettes, Paper, *Adhesives, Acetates, Vinyl radicals, Chlorides, Polymer solutions, Starches, Glues.

Moisture-proof adhesives for cigarettes are claimed which can be produced by uniform dispersal of unpeptized fine starch powder in a single or misture emulsion, either a polymerized solution of vinyl acetate or vinyl chloride. Swelling and softening of the starch or peptization of the surface of the starch grains is prevented by the use of controlled temperatures.

Ceramics and Refractories

TESTING OF GLASS; DETERMINATION OF THE ALKALI-RESISTANCE. [1962] 6p.
Order from OTS or SLA $1.10 62-18146

Trans. of [German standards specification] DIN 52, 322, Oct 57.

DESCRIPTORS: *Glass, Specifications, Standards, Water, Acids, Resistance, Chemical analysis, Tests.

Gik, D. L., Pollyak, V. V., and Tykachinskii, I. D.
SELECTION OF THE OPTIMUM METHOD OF CHARGING GLASSMELTING FURNACES (A DISCUSSION). [1962] 8p.
Order from ATS $16.00 ATS-62P64R

Trans. of Steklo i Keram[ika] (USSR) 1949, v. 6, no. 8, p. 10-14.

DESCRIPTORS: *Furnaces, *Glass, Melting, Manufacturing methods.

Kitaigorodskii, I. I. and Bondarev, K. T.
NEW GLASS CRYSTAL MATERIALS MADE FROM SLAG. 9 Nov 62 [9]p. JPRS: 16109.
Order from OTS or SLA $1.10 62-33680

Trans. of Priroda (USSR) 1962 [v. 51] no. 9, p. 111-114.

DESCRIPTORS: *Glass, *Crystals, Chemical waste, *Slags, Minerals.

Kitaigorodskii, I. I. and Blinov, V. A.
PRODUCTION OF THERMOSTABLE GLASS BY THE METHOD OF ENRICHMENT OF THE GLASS WITH SILICA (Poluchenie Termostoikogo Stekla Metodom Obogashcheniya Stekla Kremnezemom). [1962] [10]p. (foreign text included) 4 refs.
Order from OTS or SLA $1.10 62-16144

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 127, no. 2, p. 392-395.

DESCRIPTORS: Dioxides, Silicon compounds, *Glass, Production, Stability, Thermal expansion.

Koerner, O., Salmang, H., and Lerch, W.
DILATOMETRIC MEASUREMENTS OF GLASSES (Dilatometrische Messungen über den Glasigen Zustand). [1962] [11]p. (foreign text included) 11 refs.
Order from SLA $1.60 62-18120

Trans. of Sprechsaal (Germany) 1932, v. 65, no. 52, p. 925-926.

DESCRIPTORS: *Glass, Dilatometers, Measurement, Heat treatment.

Kostanyan, K. A. and Nalchadzhyan, S. O.
METHODS OF MEASURING THE SPECIFIC ELECTRIC CONDUCTIVITY OF MELTED GLASSES (O Metodike Izmereniya Udel'noi Elektroprovodnosti Rasplavlennykh Stekol). [1962] [20]p. (foreign text included) 17 refs.
Order from OTS or SLA $1.60 62-18006

Trans. of Akademiya Nauk Armyanskoi SSR [Erevan]. Izvestiya. Seriya Khimicheskikh Nauk, 1959, v. 11, no. 1, p. 3-11.

DESCRIPTORS: *Glass, Melting, Electrical conductance, Measurement.

Suggested methods for measuring the specific electric conductivity of melted glasses include (a) sounding methods, which practically eliminate the influence of the electrode voltage decline and which permit the measurement of small cell resistance values; and (b) bridge methods, which give reliable values of the specific electric conductivity at relatively high cell resistance values. It is shown that data obtained with the methods suggested agree well with each other.

Koz'min, M. I., Minakov, A. G., and Koval'chuk, G. M.
SERVICE OF THE NEW REFRACTORY TSIRALIT IN GLASS TANKS (Sluzhba Novogo Ogneupora Tsiralit v Vannykh Pechakh). [1962] [21]p. (foreign text included) 3 refs.
Order from OTS or SLA $2.60 62-18197

Trans. of #Steklo i Keramika (USSR) 1958, v. 15, no. 4, p. 11-16.

DESCRIPTORS: *Refractory materials, *Glass, Production, Quality control, Casting, Chemical analysis, Temperature, Melting, Boron compounds, Silicates, *Fused materials

Kuhne, Klaus and Skatulla, Walther.
PHYSICAL AND CHEMICAL STUDIES ON GLASSES OF THE TERNARY SYSTEM SiO_2-B_2O_3-Na_2O IN THE RANGE OF VYCOR TYPE GLASSES (Physikalische und Chemische Untersuchungen an Gläsern des Ternären Systems SiO_2-B_2O_3-Na_2O im Bereich der Gläser vom Vycor-Typ). [1962] [57]p. (foreign text included) 26 refs.
Order from SLA $5.60 62-18123

Trans. of Silikat Techn[ik] (East Germany) 1959, v. 10, no. 3, p. 105-119.

DESCRIPTORS: *Glass, *Heat treatment, Alkyl radicals, Boron compounds, Silicates, Heat resistant glass, Electron microscopy, Dioxides, Silicon compounds, Crystal structure, Porosity, Oxides, Sodium compounds, Sintering, High temperature research.

Löffler, Johannes.
ANALYSIS OF STRIAE AND LAYERS OF ETCHING AND INTERFERENCE MEASUREMENTS (Die Analyse von Schlieren und Schichten durch Ätzung und Interferenzmessung). Paper presented at the Glass Technological Meeting (no. 27) Freiburg, 13 May 53. [1962] [47]p. (foreign text included) 10 refs.
Order from SLA $4.60 62-14881

Trans. of Glastechnische Berichte (West Germany) 1954, v. 27 [no. 10] p. 381-392.

DESCRIPTORS: *Glass, Refractory materials, Stratification, Interference, Analysis, Silicon compounds, Dioxides, Hydrogen compounds, Fluorides.

The speed of dissolving of glasses in dilute HF is a property of the material, which depends upon the composition of the glasses. Striae and layers arise only if compositions are different. Therefore if one prepares a cross section and afterwards etches this one, one can produce profiles, which may be recognized then by aid of interferometric measurements. The striae with a higher silica contents appear protruding, the ones with a lower silica contents are eaten- up (eroded), i.e. after etching they appear as grooves. The striae from the glassified layers of fire clay (the ones due to dissolved refractory materials occur in rare cases only) too are etched as crests, and the minimum of the etchability is found at mixtures of glass with the glassified layer at 9% alumina assay. The striae removed from Corhart walls show mostly more sodium oxide and less silica than the ones from fire clay walls. (Author)

Löffler, Johannes.
RAPID METHOD FOR THE DIFFERENTIATION OF WALL AND BATCH STRIAE (Schnellmethode zur Unterscheidung von Wand- und Gemengeschlieren). [1962] [11]p. (foreign text included) 6 refs.
Order from SLA $1.60 62-14867

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1958, v. 31, no. 11, p. 428-431.

DESCRIPTORS: *Glass, Stratification, Interference, Analysis, Refractory materials.

Striae due to the batch usually occupy a large space within the glass and have a gradual transition to the chemical composition from striated glass to normal glass. Striae due to the refractory walls usually occupy only a very small portion of the glass and have a very sudden transition from striae to normal glass. On straight wall striae it is therefore possible to produce a total reflection which is a typical mark of its origin. The apparatus required for this is described. (Author)

Lungu, [Stelian] N. and Popescu-Has, D[umitru].
FINE CERAMIC MASSES OBTAINED BY THE CRYSTALLIZATION OF GLASS (PORCELAIN FROM GLASS) (Mase de Ceramica Fina Obtinute prin Cristalizarea Sticlelor (Portelan din Sticla)). [1962] [14]p. (foreign text included) 5 refs.
Order from SLA $1.60 62-14866

Trans. of Ind[ustria] Usoara (Rumania) 1958, v. 5, no. 2, p. 63-65.

DESCRIPTORS: *Glass, Crystallization, *Ceramic materials, Production, Mechanical properties, *Silicates.

Mazurin, O. V.
SIMILARITY OF THE DEPENDENCE OF ELECTROCONDUCTIVITY AND VISCOSITY OF GLASSES (O Skhodstve Temperaturnykh Zavisimostei Elektroprovodnosti i Vyazkosti Stekol). [1962] [14]p. (foreign text included) 19 refs.
Order from OTS or SLA $1.60 62-16679

Trans. of [Izvestiya Vysshikh Uchebnykh Zavedenii]. Khim[iya] i Khim[icheskaya] Tekhnol[ogiya] (USSR) 1958, no. 3, p. 136-141.

DESCRIPTORS: *Glass, Electrical conductance, Viscosity, Statistical functions.

All the experimental material found in the world literature indicates that the following relationship is typical for glasses: $x^n \cdot \eta = C$ where n and C are constants. Study of this relationship makes it possible for us to draw certain conclusions on energy correlations in glasses. The above relationship can be utilized for some practical calculations. (Author)

Navez, M. and Sella, C.
STUDY OF THE STRUCTURE OF GLASS FIBERS AND THIN GLASS FILMS. 1961, 5p. 2 refs.
Order from MUL $4.50 MUL-T61-6

Trans. of Academie des Sciences [Paris]. Comptes Rendus (France) 1960, v. 251, no. 4, p. 529-531.

DESCRIPTORS: *Glass, Glass textiles, Thin films, Microstructure.

Office of Technical Services, Dept. of Commerce, Washington, D. C.
CERAMICS (SUPPLEMENT TO CTR-373). Aug 62, 26p. 532 refs. OTS Selective Bibliography SB-503.
Order from OTS $0.10 OTS SB-503

DESCRIPTORS: *Bibliography, *Ceramic materials, Refractory materials, Materials.

Lists 532 foreign and domestic reports added to the OTS collection during the period 1959 to August 1962. Covers research on refractory materials for high temperature use, protective coatings for refractory metals, erosion resistant coatings for engines, metal fiber reinforced ceramics, metal-ceramic composites, metal-to-ceramic seal technology, ceramic roller bearings, microminiature ceramic capacitors, casting ceramic materials, and ceramic cutting tools among other subjects. (Author)

OTS SB-504 $0.10

Office of Technical Services, Dept. of Commerce, Washington, D. C.
CERMETS. Aug 62, 10p. 170 refs. OTS Selective Bibliography SB-504.
Order from OTS $0.10 OTS SB-504

DESCRIPTORS: *Bibliography, *Cermets, Ceramic materials, Materials.

Lists 170 reports and translations on cermets added to the OTS collection during the period 1945 to August 1962. Covers research on manufacture of metal-ceramic combinations, casting cermets, semiconducting ceramic material, high temperature cermets for machine parts, impact testing, ceramic-fiber base cermets, silicide cermets among other subjects. (Author)

Plumat, E.
STUDY OF CONTACT PHENOMENA BETWEEN GLASS AND OXIDE AT HIGH TEMPERATURE BY MEASUREMENTS OF ELECTRIC POTENTIAL (Étude des Phénomènes de Contact entre Verre et Oxyde à Haute Température par les Mesures de Potential Électrique). [1962] [31]p. (figs. tables omitted) 6 refs.
Order from SLA $3.60 62-16236

Trans. of Silicates Industriels (Belgium) 1954, v. 19 [no. 3] p. 141-154.

DESCRIPTORS: *Oxides, Mixtures, Processing, *Glass, High temperature research, Measurement, *Electric potential, Electrochemistry, *Sliding contacts, Electrical equipment.

Experimental methods were developed for determining the electromotive forces originating in various electrolytic chains and for observing the phenomena arising at the limit of phases or around electrodes. The cation screening theory of W. A. Weyl makes it possible to interpret most results by taking into consideration particularly the activation energy. Pure oxides are classified in a potential scale in function of the screening desire of their cations. Mixtures of oxides give rise to especially interesting processes; the potential can increase until a maximum for certain proportions (for example SiO_2 + Al_2O_3). (Author)

Samsonov, G. V., Semenov, Yu. N., and Borodulin, P. Ya.
A REFRACTORY BASED ON BORON NITRIDE. 13 Nov 62 [8]p. 8 refs. JPRS: 16158.
Order from OTS or SLA $1.10 63-13082

Trans. of Ogneupory (USSR) 1962, [v. 27] no. 7, p. 332-336.

DESCRIPTORS: *Boron compounds, *Nitrides, *Refractory materials, Graphite, Sintering, Resistance, Metal forming presses, Chemical reactions.

The technology of the reaction sintering of a new refractory consisting of 82-83% boron nitride and 17-18% graphite has been developed. This refractory possesses high resistivity up to 1500-1600°, a low thermal expansion coefficient, a moderate rate of evaporation in a vacuum, satisfactory strength and machineability, and also excellent resistance to the action of molten cryolite-aluminum, molten borates, chlorides, as well as the molten silicides and alloys of boron with silicon (at temperatures of 900-2000°). (Author)

Vargin, V. V. and Veinberg, T. I.
THE EFFECT OF IMPURITIES ON THE LIGHT ABSORPTION AND COLOR OF GLASSES (Vliyanie Zagryaznyayushchikh Primesei na Svetopogloshchenie i Okrashennost' Stekol). [1962] [17]p. (foreign text included) 7 refs.
Order from OTS or SLA $1.60 62-16148

Trans. of #Steklo i Keramika (USSR) 1958, v. 15, no. 5, p. 25-29.

DESCRIPTORS: Light, Absorption, Impurities, *Glass, Colors.

Weyl, A. W.
SOME ASPECTS OF THE CHEMISTRY OF GLASS SURFACE. [1955] [1]p.
Order from SLA $1.10 62-16754

Trans. from Institut du Verre. Bulletin (France) 1946, no. 3.

DESCRIPTORS: *Glass, Atomic structure, Surfaces, Chemical analysis.

Zakharikov, N. A. and Rozhanskii, A. I.
INCREASING THE LUMINOSITY AND ENRICHING THE FLAME IN GLASS FURNACES (Povyshenie Svetimosti i Obogashchenie Fakela v Steklovarennykh Pechakh). [1962] [24]p. (foreign text included) 8 refs.
Order from OTS or SLA $2.60 62-10953

Trans. of Steklo i Keramika (USSR) 1958, v. 15, no. 1, p. 4-9.

DESCRIPTORS: *Glass, *Flames, Heat transfer, Slags, Bubbles, Air, Gases, Mixtures, Jets, Nozzles, Peat, Fuels, Luminescence

Fuels, Lubricants, and Hydraulic Fluids

Böcker, A.
GREASE LUBRICATION: CHARACTERISTICS AND APPLICATIONS OF LUBRICATING GREASES. [1962] 6p. (refs. omitted).
Order from SLA $1.10 62-16933

Trans. of V[erein] D[eutscher] I[ngenieure]. Z[eits-[chrift] (West Germany) 1948, v. 90, no. 12, p. 366-368.

DESCRIPTORS: *Lubrication, *Greases, Production, Machines.

Kogarko, S. M. and Basevich, V. Ya.
ON THE BURNING MECHANISM OF AN ATOMIZED LIQUID FUEL IN A TURBULENT STREAM. 27 Feb 62 [14]p. 5 refs. FTD-TT-62-190.
Order from OTS or SLA $1.60 62-24951

Unedited rough draft trans. of Akademiya Nauk SSSR. [Otdelenie Tekhnicheskikh Nauk]. Izvestiya: Metallurgiya i Toplivo, 1961, no. 4, p. 137-142.

DESCRIPTORS: Liquids, *Fuels, Atomization, *Combustion, Turbulent flow, Drops, Vaporization, Diffusion, Temperature.

An evaluation was made of the vapor concentration of an atomized liquid fuel in the flame zone and the mechanism of its decrease was studied. Results showed that in a range of initial temperatures of 20 to 320°, flow rates from 12 to 98 m/sec, and at various mixture compositions and droplet dimensions, the following is valid. The burning mechanism is diffusionary relative to the fuel droplets. No disturbances of this mechanism which would lead to vapor accumulation in the flame zone were discovered. When fuel vapor forms before the flame zone, its burning can take place by joint diffusion with oxygen to the droplet burning zones, or with the formation of an independent vapor-burning zone (in some cases even at p_0 = 4.2 mm Hg.). When burning lean mixtures, previous partial vaporization of fuel is not permissible only if it does not lead to the formation of an independent burning zone, since in this case the vaporized fuel cannot be fully burned.

Leather and Textiles

Atlung, E.
LIGHT FASTNESS. [1962] 6p.
Order from ATS $9.50 ATS-75P64D

Trans. of Tidsskr[ift for] Textiltek[nik] (Denmark) 1960, v. 18, p. 55-57.

DESCRIPTORS: *Textiles, Colors, *Dyes, Light, Bleaching.

Barrela, A., Miro, P., and Carmen-Marin, M. del.
INFLUENCE OF THE PRESENCE OF COLLOIDAL SILICA ON THE MECHANICAL PROPERTIES OF SIZED COTTON YARNS (Influencia de la Presencia de Silice Coloidal sobre las Propiedades Mecanicas de los Hilos Encolados de Algodon). Paper from Congress of Industrial Chemistry (no. 3) Barcelona, 1960. [1962] [14]p. 9 refs.
Order from SLA $1.60 62-16753

Trans. of Investigacion e Informacion Textil (Spain) 1960, v. 3, no. 4, p. 285-293.

DESCRIPTORS: *Threads, *Cotton, *Sizing, Mechanical properties, Dioxides, *Silicon compounds, *Colloids.

The influence of colloidal silica on the mechanical properties of sized cotton yarns has been investigated, and there has been observed by application of factoral analysis that this product exercises a possibly significant influence on resistance to repeated stretching where there is a likewise significant interaction between the percentages of size and of colloidal silica. There was likewise studied the influence of time of addition of the silica during the operation, as well as the influence of the presence of certain softeners. The first affects extension to break of the yarns and the second, the resistance to abrasion and possibly, resistance to repeated extensions. (Author)

Enders, H. and Wiest, H. K.
FLUOROCARBON POLYMERS IN TEXTILE FINISHING. [1962] 40p.
Order from ATS $38.75 ATS-96P62G

Trans. of Textil-Rundschau (Switzerland) 1961, v. 16, p. 531-560.

DESCRIPTORS: *Textiles, *Finishes, *Polymers, *Fluorocarbons.

Fourne, F.
HEAT-SETTING OF COMPLETELY SYNTHETIC FIBERS. [1962] 12p.
Order from ATS $13.75 ATS-51P64G

Trans. of Melliand Textilber[ichte] (West Germany) 1952, v. 33, no. 7, p. 639-643.

DESCRIPTORS: *Synthetic fibers, Fibers, Processing, Heat treatment.

Hornuff, G. v. and Herzog, W.
SOIL-REPELLENT PROPERTIES OF FIBRES TREATED WITH CHROMIUM COMPLEXES OF THE WERNER TYPE AS A FUNCTION OF THE CHEMICAL STRUCTURE OF THE MONOCARBOXYLIC ACID USED. Sep 62.
Order from TTIS $30.00 TTIS NS 40

Trans. of Journal für Praktische Chemie (East Germany) 1962 [ser. 4] v. 15, Mar, p. 175-191.

DESCRIPTORS: *Fibers, Impregnation, *Complex compounds, *Chromium compounds, Molecular structure, *Carboxylic acid.

Lobel, W.
ELECTROSTATIC TESTING METHODS. [1962] 20p.
Order from ATS $29.25 ATS-32P63G

Trans. of Faserforsch[ung und] Textiltech[nik] (Germany) 1962, v. 13, no. 3, p. 112-124.

DESCRIPTORS: Textiles, *Non-destructive testing, *Electrostatics, Test methods.

Moehring, Albert and Duwe, Günter.
VARIATION OF THE DOUBLE REFRACTION AS AN EXPRESSION OF THE STRUCTURE DEVELOPMENT DURING THE HEATING AND RECOOLING OF HIGH-POLYMERIC FIBERS. II. POLYAMIDE FIBERS. [1962] 23p. (13 figs. omitted) 11 refs.
Order from SLA $2.60 62-14079

Trans. of Faserforschung und Textiltechnik (Germany) 1960, v. 11 [no. 1] p. 7-15.

DESCRIPTORS: *Synthetic fibers, *Amides, *Polymers, Processing, Refractive properties, Heating, Cooling.

Takahashi, Masao.
INVESTIGATION OF THE SIGNIFICANCE OF ALCOHOL SYSTEM SPINNING BATHS IN THE WET SPINNING OF ACRYLONITRILE FIBER (COMPARISON OF VARIOUS ALCOHOLS FOR THE COAGULATING BATH IN WET SPINNING). Rept. 25 of Studies on Acrylic Fiber. [1962] 8p. 1 ref.
Order from SLA $1.10 62-14968

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 6, p. 1130-1132.

DESCRIPTORS: *Synthetic fibers, *Acrylonitriles, Manufacturing methods, *Alcohols, Coagulation, Organic solvents, Methyl radicals, Formamides, Sulfoxides.

States of fiber formation when concentrated dimethyl formamide or dimethyl sulfoxide solutions of acrylonitrilemethyl acrylate copolymers were spun with alcohols as coagulating baths were examined. Although the spinnability of the dope became smaller the smaller the coagulating force, represented by the coagulating value, when the coagulating force was excessively small spinnability became greater instead. The denseness of the formed filaments became greater the smaller the coagulating force. (Author)

Takahashi, Masao.
SOLUBILITY OF ACRYLONITRILE POLYMER IN ACETONITRILE SYSTEM MIXED SOLVENTS (MIXED SOLVENTS CONTAINING ACETONITRILE AS A COMPONENT). Rept. 36 of Studies on Acrylic Fiber. [1962] 7p. 13 refs.
Order from SLA $1.10 62-14969

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 6, p. 1132-1134.

DESCRIPTORS: *Synthetic fibers, *Acrylonitriles, Solubility, Organic solvents, *Acetonitriles, Methyl radicals, Formamides, Sulfoxides.

A system prepared by mixing 20 vol% of acetonitrile with nitromethane forms a semi-transparent unstable solution. A system prepared by mixing 20 ~ 60 vol% of acetonitrile with malononitrile forms a stable solution. When acetonitrile is added to dimethylsulfone, the dissolving temperature drops. A system prepared by mixing 60 ~ 80 vol% of acetonitrile with succinimide forms a solution. By mixing, these four types of systems improve in dissolving power than by either of the two solvents alone. Even when acetonitrile is mixed in fairly abundant quantity, γ-butyrolactone, dimethyl sulfoxide, dimethyl formamide, ethylene carbonate, ethylene cyanohydrin, succinic anhydride, maleic anhydride, and α-pyrrolidone form mixed systems demonstrating dissolving power. (Author) (See also 62-14968)

Paints and Finishes

Funke, W.
COMPARATIVE EXPERIMENTS ON DRYING TEST METHODS FOR PAINTS. 14 Nov 62, 4000 words.
Order from TTIS $36.00 TTIS-2428

Trans. of Farbe und Lack (West Germany) 1961, v. 67 [no. 12] p. 748-758.

DESCRIPTORS: Paints, Dehydration, Test methods.

Haznadaroff, B.
DRYING OF VARNISH COATINGS AND WET SURFACES BY INFRA-RED HEATING: DESCRIPTION OF EQUIPMENT. 12 Feb 48, 9p. (figs. omitted).
Order from SLA $1.10 62-18347

Trans. of Revue Générale de l'Electricité (France) 1945 [v. 54, no. 10] p. 298-302.

DESCRIPTORS: *Coating, *Varnishes, Dehydration, *Infrared radiation, Surfaces, Moisture, *Infrared equipment.

Jordan, O.
PROGRESS IN THE USE OF SYNTHETIC LACQUER RAW MATERIALS. 8 Jan 47, 3p.
Order from SLA $1.10 62-18349

[Condensed] trans. of Kunststoffe (Germany) 1942, v. 32 [no. 7] p. 221-223.

DESCRIPTORS: *Varnishes, Porosity, Plastic coatings, Plastic paints, Chemical industry, Plasticizers, Enamel coatings, *Aliphatic compounds.

Merz, A.
NEW METHODS FOR THE DRYING OF LACQUERS. 15 Apr 49, 8p. (figs. tables omitted).
Order from SLA $1.10 62-18416

Trans. of Arch[iv] f[ür] Metallkunde (Germany) 1947, v. 1, no. 10, p. 456-460.

DESCRIPTORS: *Varnishes, *Dehydration, Electric currents, Induction heating.

Rechmann, H.
PARTICLE SIZE DISTRIBUTION IN TITANIUM DIOXIDE PIGMENT SUSPENSIONS. Oct 62, 3500 words
Order from TTIS $36.00 TTIS 2421

Trans. of Farbe und Lack (West Germany) 1962, v. 68 [no. 1] p. 23-31.

DESCRIPTORS: *Pigments, *Titanium compounds, Dioxides, Emulsions, Particles, Distribution

Vargin, V. V. and Tsekhomskaya, T. S.
METAPHOSPHATES AS A BASE FOR LOW-MELTING ENAMELS. [1962] 7p.
Order from ATS $7.50 ATS-76P64R

Trans. of #Zh[urnal] Prikl[adnoi] Khim[ii] (USSR) 1960, v. 33, no. 12, p. 2633-2637.

DESCRIPTORS: *Enamel coatings, Melting, *Phosphates.

Photographic Materials

Anfilov, I. V. and Fridkin, V. M.
THE PROBLEM OF THE KINETICS OF THE DEVELOPMENT OF THE LATENT ELECTROPHOTOGRAPHIC (XEROGRAPHIC) IMAGE. [1962] 2p.
Order from ATS $2.50 ATS-36P63R

Trans. of Zh[urnal] Nauchn[oi] i Prikl[adnoi] Fotogr[afii] i Kinematogr[afii] (USSR) 1960, v. 5, p. 367-368.

DESCRIPTORS: *Electrophotography, Printing, Optical images, Dynamics.

Ikeda, T., Murakami, T. and others.
FORMATION OF HALFTONE IMAGES BY CONTACT PRINTING OF HALFTONE POSITIVES. Pt. 1 of Tone Reproduction by Electrophotography. [1962] 10p.
Order from ATS $13.50 ATS-51P62J

Trans. of Denshi Shashin (Japan) 1961, v. 3, no. 3, p. 49-54.

DESCRIPTORS: *Electrophotography, *Printing, Optical images.

Ikeda, T., Murakami, T. and others.
REDUCTION AND REMOVAL OF FOG WITH A CARRIER BUSH. Pt. 2 of Tone Reproduction by Electrophotography. [1962] 6p.
Order from ATS $10.75 ATS-52P62J

Trans. of Denshi Shashin (Japan) 1961, v. 3, no. 3, p. 55-58.

DESCRIPTORS: *Electrophotography, Printing, Fog, Reduction, Brushes.

Kinjyo, K., Nagashima, S., and Yoshitake, K.
ELECTROPHOTOGRAPHIC PROPERTIES OF SOME ORGANIC PHOTOCONDUCTORS, PT. I. [1962] 6p.
Order from ATS $6.75 ATS-49P62J

Trans. of Denshi Shashin (Japan) 1961, v. 3, no. 3, p. 29-32.

DESCRIPTORS: *Electrophotography, Organic compounds, *Photoelectric materials, Photoconductivity.

Kinjyo, K., Nagashima, S. and others.
STUDY OF ELECTRICAL PROPERTIES OF ZINC OXIDE-RESIN DISPERSION SYSTEMS IN ELECTROPHOTOGRAPHY, PT. I. [1962] 8p.
Order from ATS $12.50 ATS-50P62J

Trans. of Denshi Shashin (Japan) 1961, v. 3, no. 3, p. 33-38.

DESCRIPTORS: *Electrophotography, *Zinc compounds, Oxides, *Resins, Electrical properties.

Kurita, T.
AN ASPECT ON THE MECHANISM OF LIQUID DEVELOPMENT. [1962] 6p.
Order from ATS $9.50 ATS-48P62J

Trans. of Denshi Shashin (Japan) 1961, v. 3, no. 3, p. 26-28.

DESCRIPTORS: *Electrophotography, Photographic chemicals, Printing.

Sheberstov, V. I.
AGEING PROCESSES AND THE STABILIZATION OF PHOTOGRAPHIC FILMS (Protsessy Stareniya i Stabilizatsii Fotograficheskikh Sloev). [1962] [56]p. (foreign text included) 76 refs.
Order from OTS or SLA $5.60 62-16521

Trans. of Uspekhi Nauch[noi] Fot[ografii] (USSR) 1960, v. 7, p. 25-49.
Also available without foreign text from OTS or SLA $4.60 as 62-14465 [1962] 43p.

DESCRIPTORS: *Photographic film, Stabilization, *Aging, Light, *Sensitivity, *Photographic emulsions, Silver compounds, Bromides, Organic compounds, A survey.

Plastics

CATALYTIC SYSTEM FOR PRODUCTION AT LOW PRESSURE OF HIGHLY HOMOGENEOUS AND CRYSTALLINE OLEFINIC POLYMERS, PARTICULARLY POLYETHYLENE AND POLYPROPYLENE. [1962] 23p.
Order from RIS $49.00 RIS rept. 97056

Trans. of Belgian patent application 568 002, by Société Belge du Titane S. A., filed 23 May 58 (priority: U.S. patent appl. filed 28 May 57).

DESCRIPTORS: *Plastics, Polymers, *Ethylenes, *Propenes, Production, Polymerization, Physical properties, Crystals, *Catalysts, *Titanium compounds, Anhydrides, Chlorides, Aluminum, Organic solvents, Reagents.

MECHANICAL TESTS OF PLASTICS. 11 June 62, 4p.
AID rept. 62-77.
Order from OTS or SLA $1.10 62-32119

Review of #Zavodskaya Laboratoriya (USSR) 1960, v. 26, no. 1, p. 3-5, 7-28, 655-678 and 1962, v. 28, no. 4, p. 480-473 [sic].

DESCRIPTORS: *Plastics, Physical properties, Mechanical properties, Test methods.

Contents:
On methods for the study and testing of the physical and mechanical properties of plastics
Answers to the questionaire on methods of testing the physical and mechanical properties of plastics
Discussion on methods of investigation and testing the physical and mechanical properties of plastics;

answers to the questionnaire published in Zavodskaya Laboratoriya (USSR) 1960, [v. 26] no. 1
Basic trends in the field of mechanical tests and study of the structural strength of plastics.

Baibaeva, S. T., Smilga, Kh. V., and Tomilova, N. D.
DETERMINATION OF METHYLOL GROUPS AND FORMALDEHYDE IN PHENOL-AND CRESOL-FORMALDEHYDE RESINS. Oct 62, 1000 words.
Order from TTIS $10.00 TTIS-4025

Trans. of Lakokrasochnye Materialy [I Ikh Primenenie] (USSR) 1962, no. 2, p. 52-54.

DESCRIPTORS: *Phenol-formaldehyde resins, Creosote, Methyl radicals, Formaldehyde, Determination, Resins.

Bonnet-Descars, Cl.
ELECTRODEPOSITION OF SYNTHETIC RESINS. [1962] 5p. (figs. refs. omitted).
Order from SLA $1.10 62-16934

Trans. of Rev[ue] Gén[érale des] Mat[ières] Plastiques (France) 1940, v. 16, p. 54-57.

DESCRIPTORS: *Plastics, *Resins, Styrenes, Acrylic resins, Urea formaldehyde resins, *Coatings, *Electrodeposition.

Kamenskii, I. V., Sanin, I. K., and Korshak, V. V.
POLYMERS BASED ON SILICON-CONTAINING FURAN COMPOUNDS: THE SYNTHESIS OF ORTHO SILICIC ACID-FURFURYL ALCOHOL ESTERS. July 62 [5]p. 25 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Plast[icheskie] Massy (USSR) 1962, no. 3, p. 8ff.

DESCRIPTORS: Polymers, Plastics, *Furan resins, *Furfuryl alcohols, *Silicic acids, Synthesis, Hardening, *Silanes.

Kharitonov, V. M., Speranskii, A. A., and Got'e, T. N.
DELUSTERING OF POLYAMIDE RESIN IN THE COURSE OF ITS PRODUCTION. [1962] 4p.
Order from ATS $6.00 ATS-44P64R

Trans. of Khim[icheskie] Volokna (USSR) 1961, no. 6, p. 56-57.

DESCRIPTORS: *Polyamide plastics, Production, *Amides, Plastics.

Kraus, A[lfred].
NEW PLASTICIZERS. Rept. no. 38 of Information on Plasticizers for Nitrocellulose Lacquers. [1962] 11p.
Order from SLA $1.60 62-16290

Trans. of article from an unidentified source, n. d.

DESCRIPTORS: *Plasticizers, *Nitrocellulose, *Varnishes, Behavior.

The behavior of four plasticizers which recently appeared on the market (trisdibromopropylphosphate, dibutylfumarate, dioctylfumarate and dimethylitaconate) in nitrocellulose lacquers is described. These plasticizers have a high solvent power with respect to collodion cotton and a high stability with respect to light with minimum fading in films. (Author)

Moshkin, P. A., Gefter, E. L., and Rubtsova, I. K.
SYNTHESIS AND APPLICATIONS OF ORGANOPHOSPHORUS COMPOUNDS IN THE PLASTICS INDUSTRY. [1962] 7p.
Order from ATS $9.50 ATS-99P63R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 279-284.
A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphorus compounds, Organic compounds, *Plastics, Chemical industry, Synthesis.

Penczek, P.
TERPENE-MALEIC ANHYDRIDE CURING AGENTS FOR EPOXY RESIN CURING. 14 Nov 62, 3500 words.
Order from TTIS $30.00 TTIS NS 54

Trans. of Polimery [Teorzywa Wielkocza'steczkowe] (Poland) 1962, v. 7, June, p. 210-215.

DESCRIPTORS: *Epoxy, Resins, *Terpenes, *Maleic anhydride, Infrared spectroscopy.

Penczek, P.
UNSATURATED POLYESTERS MODIFIED WITH ANTHRACENE-MALEIC ANHYDRIDE ADDUCTS. 14 Nov 62, 2000 words.
Order from TTIS $21.00 TTIS NS 55

Trans. of Plaste und Kautschuk (Germany) 1962, v. 9 [no. 9] p. 425-428.

DESCRIPTORS: Polyester plastics, Heat resistant polymers, Dielectric properties, Production, *Anthracenes, *Maleic anhydride, Clatherate compounds, Esters, *Plastics.

Petrov, K. A., Parshina, V. A., and Daruze, G. L.
PHOSPHORUS-CONTAINING POLYESTER AND POLYAMIDE RESINS. [1962] 7p.
Order from ATS $11.00 ATS-00P64R

Trans. of mono. Khim[iya] i Primenenie Fosfororgan[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk. Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 285-291.

A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Polyester plastics, *Polyamide plastics, *Phosphorus, Esters, Amides, *Plastics.

Ratnikova, K. I.
SYNTHESIS OF HYDROCARBON-FORMALDEHYDE POLYMERS AND THEIR USE IN SURFACE COATINGS. Sep 62, 2000 words.
Order from TTIS $18.00 TTIS 4016

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1962, no. 1, p. 17-20.

DESCRIPTORS: Polymers, *Plastic coatings, *Formaldehyde, Hydrocarbons, Xylenes, Naphthalenes, Naphtha, Catalysts, Sulfuric acids.

Tager, A. A., Suvorova, A. I. and others.
PLASTICIZATION OF POLY (METHYL METHACRYLATE) WITH ESTERS OF DIPHENIC AND NAPHTHALIC ACIDS. Pt. 2 of Effect of the Chemical Structure and Size of Plasticizer Molecules on the Glass Temperature of Polymers. [1962] 7p.
Order from ATS $9.00 ATS-38P64R

Trans. of Vysokomolekul[yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 6, p. 809-814.

DESCRIPTORS: *Plasticizers, Molecular structure, Phenyl radicals, Naphthyl radicals, Acids, Esters, *Acrylic resins, Hardening, Temperature.

Yakoblev, A. D. and others.
NEW DISPERSING MEDIUM FOR ACRYLONITRILE ORGANOSOLS. 14 Nov 62, 500 words.
Order from TTIS $3.00 TTIS 4026

Trans. of Russian patent 147,709, A: 1961.

DESCRIPTORS: *Plastic coatings, Colloids, *Acrylonitriles, Mixtures, Ethyl radicals, *Formamides, Hydrocarbons, *Ethanols, Cyclohexanes, Plasticizers.

Ziegler, Karl.
IMPROVEMENTS OF POLYPROPYLENE AND METHODS FOR THEIR PRODUCTION. [1962] 16p.
Order from RIS $35.00 RIS rept. 96957

Trans. of Belgian patent application 562 918, [1957] by Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan (priority: Italy, 4 Dec 56, no. 18 022).

DESCRIPTORS: *Plastics, Polymers, *Propenes, Production, Polymerization, Crystals, Catalysts, Titanium compounds, Chlorides, Alkyl radicals, Aluminum compounds, Organic solvents, Ethyl radicals, Hexanes, Octanes, Vinyl chlorides.

Wood and Paper

Emendator.
WHERE IS THE FAULT? [1962] [10]p.
Order from SLA $1.10 62-16531

Trans. of Wochenblatt [für] Papierfabrik[ation] (West Germany) 1961, v. 89, no. 22, p. 1061-1064.

DESCRIPTORS: *Paper industry, *Fiberboard, Wood pulp, Wood pulp fibers, Wood pulp machines, Cleaning, Impurities, Strainers, Quality control, Production, *Paper, Processing

Odintsov, P. N.
SWELLING OF LIGNIN (Nabukhanie Lignina). [1961] [34]p. (foreign text included) 14 refs.
Order from OTS or SLA $3.60 61-20833

Trans. of Akad[emiya] Nauk Latv[iiskoi] SSR [Riga], Inst[itut] Lesokhoz[yaistvennykh] Problem. Trudy, 1959, v. 17, p. 3-14.

DESCRIPTORS: *Lignin, *Wood, *Hydrolysis, Mechanical properties, Water, Organic solvents, Solvent action, Sulfuric acid, Carbohydrates, Chemical reactions.

Q., K. G.
CIGARETTE PAPER AND ITS PROPERTIES. [1962] 7p.
Order from K-H $8.75 K-H-9808

Trans. of Allgemeine Papier-Rundschau (West Germany) 1959, no. 12, p. 613-614.
Other translations are available from SLA mi$1.80, ph$1.80 as 60-18924, Sep 60, 3p. and $1.10 as 61-20885 [1961] 7p.

DESCRIPTORS: *Cigarettes, *Paper, Processing.

MATHEMATICS

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 39(MATHEMATICS SERIES). 16 Nov 62 [17]p. JPRS: 16210.
Order from OTS or SLA $1.60 63-13104

Trans. of selected abstracts from Referativnyi Zhurnal. Matematika (USSR) 1962, no. 6.

DESCRIPTORS: *Abstracts, *Mathematics, Topology, Functions, Real variables, Complex variables, Differential equations, Integral equations, Numerical methods and procedures, Cybernetics, Literature, China.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 42 (MATHEMATICS SERIES). 26 Nov 62 [21]p. JPRS: 16322.
Order from OTS or SLA $1.60 63-13327

Trans. of selected abstracts from Referativnyi Zhurnal. Matematika (USSR) 1962, no. 7.

DESCRIPTORS: *Abstracts, *Mathematics, Applied mathematics, *Probability, Statistical processes, *Cybernetics, China.

Bermant, A. F.
A COURSE OF MATHEMATICAL ANALYSIS, PTS. 1-2, trans. ed. by I. N. Sneddon. June/July 62, 2v.
Order from Addison-Wesley Pub. Co., Inc., Reading, Mass. pt. 1 approx. $10.00
pt. 2 approx. $9.50

Trans. of monos. [Kurs Matematicheskogo Analiza, v. 1, Moscow, 1957, 466p. and v. 2, Moscow, 1958, 466p.].

DESCRIPTORS: *Textbooks, Mathematics, *Mathematical analysis, Applied mathematics, Functions, Complex variables, Differential equations, Series, Fourier analysis, Trigonometry, Integrals, Calculus.

Fuchs, L.
PARTIALLY ORDERED ALGEBRAIC SYSTEMS. Vol. 28 of International Series of Monographs on Pure and Applied Mathematics. June/July 62, approx. 200p.
Order from Addison-Wesley Pub. Co, Inc., Reading, Mass. approx. $6.50

Trans. of unidentified Hungarian (?) mono, n. p., n. d.

DESCRIPTORS: *Groups (Mathematics), *Algebra.

Fuks, B. A. and Shabat, B. V.
FUNCTIONS OF A COMPLEX VARIABLE AND SOME OF THEIR APPLICATIONS, VOL. 1. June/July 62, approx. 350p.
Order from Addison-Wesley Pub. Co., Inc., Reading, Mass. approx. $7.50

Trans. of mono. [Funktsii Kompleksnogo Peremennogo i Nekotorye Ikh Prilozhenia, v. 1, Moscow, n. d.].

DESCRIPTORS: *Functions, *Complex variables, Conformal mapping, Integrals, Applied mathematics, Mathematics.

Pogorzelski, W.
TRANSFORMATIONS OF SINGULAR ITERATED INTEGRALS IN SPACE (Transformations des Intégrales Itérées Singulières dans l'Espace). 15 Sep 61 [10]p. JPRS: 10187.
Order from OTS or SLA $1.10 62-23267

Trans. of [Polska Akademia Nauk. Wydzial 3: Nauk Matematycznych, Fizycznych, Chemicznych, Geologo-Geograficznych]. Bulletin: Serie des Sciences Mathematiques, Astronomiques et Physiques, 1961, v. 9 no. 2, p. 69-74.

DESCRIPTORS: *Integrals, *Transformations (Mathematics), Algebraic topology.

Computing Devices

CYBERNETICS AND CONTROL THEORY. 23 Nov 62 [19]p. 4 refs. JPRS: 16303.
Order from OTS or SLA $1.60 63-13267

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 145, no. 1, p. 48-55.

DESCRIPTORS: *Cybernetics, Control systems, Theory, *Computers, Programming, Special functions, *Nonlinear systems, Stability numerical analysis.

Contents:
On the algorithmic complexity of discrete functions, by Yu. Ofman
Over-all stability of nonlinear pulsed automatic systems, by Ya. Z. Tsypkin.

USE OF SOVIET DIGITAL COMPUTERS. 14 Nov 62 [8]p. JPRS: 16173.
Order from OTS or SLA $1.10 63-13067

Trans. of selected excerpts from 3 Russian monos.

DESCRIPTORS: *Digital computers, Computers, Operation, *Punched card methods, Handbooks.

Contents:
Experience in the Operation of the Ural digital computers, by M. V. Burakov (Opyt Ekspluatatsii Tsifrovo Vychislitel'noi Mashiny Ural, Moscow, 1962, p. 2-4)
System of punched card input and output devices for the BESM-2 computer, by L. A. Zak and others (Sistema Ustroistv Vvoda i Vyvoda na Perfokartakh Vychislitel'noi Mashiny BESM-2, Moscow, 1961, p. 3, 5)
Computer laboratory handbook, by L. Z. Rumshiskii (Vychislitel'nyi Laboratornyi Praktikum, Moscow, 1961, p. 1, 5-6).

Bruk, I. S.
APPLICAZIONE DEI CALCOLOTORI NUMERICI NEI LAVORI DI PROGETTAZIONE (Application of numerical Computers in Progress works). 15p. CNP-24. (text in Italian).
Order from OTS or ETC $1.85 62-26078

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Energetika i Avtomatika, 1959, no. 3, p. 141-150.
A trans. is available in English from OTS $0.75 as 60-11092, JPRS(NY)-2028, 27 Nov 59, 28p.

DESCRIPTORS: *Digital computers, Data processing systems.

Karatsuba, A. A.
SOLUTION OF A PROBLEM FROM THE THEORY OF FINITE AUTOMATA. [1960] 4p. 1 ref.
Order from OTS $0.50 62-11456

Trans. of Usp[ekhi] Matem[aticheskikh] Nauk (USSR) 1960, v. 15, no. 3(93), p. 157-159.

DESCRIPTORS: Machines, Computers, *Automation, Theory, Sequential analysis.

The solution of the problem consists of the proof of two theorems: (1) If S is an (n, m, p) machine with pairwise distinguishable states, then there exists a sub-experiment of length no greater than $\frac{(n-1)(n-2)}{2}+1$ with the aid of which the state of S at the end of the experiment may be determined; and (2) there exists an (n, m, p) machine with pairwise distinguishable states such that the length of the shortest experiment establishing the state of the machine at the end of the experiment is equal to $\frac{(n-1)(n-2)}{2}+1$. (Author)

Poppe, K. E.
DATA COLLECTION AND PROCESSING - FROM THE PAST TO THE FUTURE. Nov 62.
Order from BISI £3 10s BISI-3003

Trans. of Stahl und Eisen (West Germany) 1962, v. 82 [no. 16] p. 1093-1099.

DESCRIPTORS: Computers, *Data processing systems, Electrical equipment, Electronic equipment, *Rolling mills.

MECHANICS

Hempel, M.
FATIGUE STRENGTH EXPERIMENTS AND THEIR EVALUATION WITH THE USE OF STATISTIC METHODS. [1962] 6p. (figs. and refs. omitted).
Order from SLA $1.10 62-16953

Trans. of Draht (West Germany) 1954 [v. 5, no. 10] p. 375-378.

DESCRIPTORS: *Fatigue (Mechanics), Statistical analysis, Stresses, Fracture (Mechanics).

Kulikovskii, A. G.
ON MEDIA ADMITTING ONE-DIMENSIONAL MOTIONS WITH UNIFORM DEFORMATION. [1959] 2p. 5 refs. MDF K-182.
Order from OTS $0.50 62-11309

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1958, v. 120, no. 3, p. 485-486.

DESCRIPTORS: *Continuum mechanics, *Continuous media, Motion, Deformation, Theory, Equations of state.

An analysis shows to which equation of state a medium must be subject if it admits one-dimensional motions with uniform deformation.

Olszak, W., Mroz, Z., and Perzyna, P.
RECENT TRENDS OF DEVELOPMENT IN THE THEORY OF PLASTICITY. June/July 62, approx. 225p.
Order from PP

Trans. of unidentified mono., n.p., n.d.

DESCRIPTORS: *Plasticity, Theory.

Oschatz, H.
FATIGUE TESTING OF WIRES. [1962] 4p. (figs. refs. omitted).
Order from SLA $1.10 62-16997

Trans. of Draht (West Germany) 1955, v. 6, no. 1, p. 12-13.

DESCRIPTORS: Wire, *Electric wire *Fatigue (Mechanics), Test equipment, Cordage, Stresses, Mechanical properties.

Aerodynamics and Pneumatics

Khanin, I. M., Ivanov, S. M., and Kartsinel, M. B.
FLOW DISTRIBUTION IN A HOLLOW APPARATUS HAVING DIFFERENT TYPES OF GAS INLETS. [1962] 7p.
Order from OTS or SLA $1.10 AEC-tr-4998

Trans. of Akademiya Nauk, URSR [Kiev]. Dopovidi, 1961, no. 3, p. 316-320.

DESCRIPTORS: *Gas flow, Distribution, Pressure, *Aerodynamic configurations, Absorption, Cylindrical bodies.

Experiments were carried out to determine the best type of inlet to assure uniform flow distribution. The investigations were conducted using the theory of similarity; an aerodynamic model of organic glass was used.

Ladyzhevskii, M. D.
HYPERSONIC FLOW AROUND THIN BLUNTED BODIES. 1 May 62 [7]p. 5 refs. FTD-TT-62-639.
Order from OTS or SLA $1.10 62-25856

Unedited rough draft trans. of A[kademiya] N[auk] SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izvestiya: Mekhanika i Mashinostroenie, 1961, no. 1, p. 150-151

DESCRIPTORS: *Blunt bodies, Hypersonics, *Hypersonic flow, Shock waves.

See also 60-21750, 62-23229

Hydrodynamics, Hydraulics, and Hydrostatics

FOUR PROPELLER GRAPHS, tr. by F. A. Raven. June 58 [6]p. STS-285E; Bureau of Ships Translation 655E.
Order from OTS or SLA $1.10 59-16027

Trans. of 4 diagr. from unidentified German mono., Heidenheim, 13 Feb 35.

DESCRIPTORS: *Marine propellers, Hydrodynamics, Thrust, Velocity.

Kiselev, M. I.
APPLICATION OF SELSYNS FOR LEVEL INDICATION 27 July 62 [5]p. FTD-TT-62-525; AD-284 131.
Order from OTS or SLA $1.10 62-32936

Unedited rough draft trans. of Promyshlennaya Energetika (USSR) 1958 [v. 13] no. 3, p. 12-13.

DESCRIPTORS: *Synchros, *Liquid level gages, *Liquid level control, Water, Pressure, Towers.

Konobeev, V. I. and Zhavoronkov, N. M.
HYDRAULIC RESISTANCES IN TUBES WITH NAVY ROUGHNESS. July 62 [7]p. 8 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskoe] Mashinostroenie (USSR) 1962 [v. 4] no. 1, p. 14ff.

DESCRIPTORS: Hydrodynamics, *Hydraulic systems, Pipes, Resistance, Viscosity, Pressure, Velocity, Absorption, Partial differential equations.

Korop, B. P.
DEVICE FOR MEASURING THE RATE OF FLOW. 26 July 62 [5]p. FTD-TT-62-778; AD-283 897.
Order from OTS or SLA $1.10 62-32679

Unedited rough draft trans. of [Soviet] patent 139087, appl. no. 661058/26, 2 Apr 60, p. 1-2.

DESCRIPTORS: *Flowmeters, Hydraulic research, Instrumentation, Fluid flow, Velocity, Design.

The device for measuring the rate of flow with velocity head absorbing spherical fitting at the tip of the elastically fastened rod, carrying the movable contacts of electrolytic converter of mechanical displacements into an electric signal, is distinguished by the fact, that to measure simultaneously three flow velocity components in a point, the mentioned rod with the aid of diaphragm and plane parallel springs is secured in the body with the possibility of shifting in three mutually perpendicular directions and provided at the outlet from the housing with liquid capillary-labyrinth packing. (Author)

Winkel, R.
THE MOVEMENT OF WATER IN PIPE LINES WITH ANNULAR CLEARANCE CROSS SECTION OF FLOW (LABYRINTH PACKING). [1962] 11p. (figs. omitted).
Order from SLA $1.60 62-18324

Trans. of Z[eitschrift für] Angew[andte] Math[ematik] und Mech[anik] (Germany) 1923, v. 3/4, p. 251-257.

DESCRIPTORS: *Pipes, *Water, *Motion, *Turbulent flow, Velocity, Pneumatic packings, Fluid mechanics.

METALLURGY

PRECISION ALLOYS: [SELECTED ARTICLES].
31 Oct 62 [63]p. 67 refs. JPRS: 15967.
Order from OTS or SLA $6.60 62-33725

Trans. of [Tsentral'nyi Nauchno-Issledovatel'skii Institut Chernoi Metallurgii. Sbornik Trudov] (USSR) 1962, v. 25, p. 5-32 and 344-360.

DESCRIPTORS: *Alloys, Magnetic properties, Dislocations, Crystal structure, Permeability, Stability, *Silicon alloys, *Iron alloys, Annealing, Deformation, Microstructure, *Magnetic alloys, Magnetic fields, *Liquid metals, *Atomization, Powder alloys, Chemical analysis, Particles, Controlled atmospheres, Instrumentation, Reaction kinetics.

Contents:
The magnetic and dislocation structure of alloys, by B. V. Molotilov and L. N. Fedorov
The magnetic structure of a deformed and annealed iron-silicon alloy, by B. V. Molotilov
Investigation of the process of atomization of a liquid stream of metals and alloys by gaseous energy carriers, by B. N. Putimtsev.

PRODUCTION OF POWDERS OF REFRACTORY METALS. 13 Nov 62 [16]p. 18 refs. JPRS: 16160.
Order from OTS or SLA $1.60 63-13071

Trans. of #Tsvetnye Metally (USSR) 1962 [v. 35] no. 8, p. 44-47 and 72-76.

DESCRIPTORS: Posder metals, Production, *Refractory materials, *Heat resistant alloys, Powder alloys, Hydroxides, Reduction, Niobium, Hydrogen, Tantalum, *Tantalum alloys, *Niobium alloys, Electrolysis, *Nickel compounds, *Cobalt compounds.

Contents:
Autoclave reduction of hydroxides of nickel and cobalt with hydrogen, by G. N. Dobrokhotov and others
Production of electrolytic tantalum, niobium, and their alloys, by V. I. Konstantinov and V. M. Amosov.

SEMI-AUTOMATICS FOR HARDENING OF FILES (DATA SHEET). Oct 62.
Order from HB $2.00 HB-5484

Trans. of #Metallovedenie i Term[icheskaya] Obrabotka Metallov (USSR) 1960, no. 8, p. 31-34.

DESCRIPTORS: *Cutting tools, *Hardening, Heat treatment, Automatic, Processing, Data.

SOVIET STUDIES IN POWDER METALLURGY.
20 Nov 62 [60]p. 65 refs. JPRS: 16269.
Order from OTS or SLA $5.60 63-13309

Trans. of Issledovaniya po Zharoprochnym Splavam (USSR) 1962, v. 8, p. 88-126.

DESCRIPTORS: *Powder metallurgy, Alloys, *Tungsten alloys, Carbides, *Cobalt alloys, Additives, Microstructure, Physical properties, *Titanium alloys, *Nickel alloys, *Chromium alloys, Metal forming presses, Vibration mechanisms, Thermal stresses, Resistance, Foils, Sheets, Graphite, *Sintering, Viscosity.

Contents:
The effect of alloying on the structure and properties of powder-metal hard alloys of tungsten carbide and cobalt, by V. F. Funke and others
On the structure of alloys of titanium carbide with nickel, chromium, and molybdenum, by V. N. Eremenko and others
An investigation of the principles in vibration pressing of powder metals and their compounds, by N. S. Gorbunev and others
Certain problems in the theory of the thermal shock resistance of powder metal materials, by M. Yu. Bal'shin and V. I. Likhtman
Viscous flow in the sintering of powders by hot pressing, by M. S. Keval'chenko and G. V. Samsonov.

Altenpohl, D.
VACANCIES IN ALUMINUM. Presented at the International Light Metals Conference (no. 4) Leoben, 20 June 61. [1962] 26p. (27 figs. omitted) 67 refs.
Order from SLA $2.60 62-14836

Trans. of Aluminium (Germany) 1961, v. 37, no. 7, p. 401-411.

DESCRIPTORS: *Aluminum, *Lattices, Thermal diffusion, Plasticity, Deformation, Atomic structure, *Aluminum alloys, Single crystals.

Alvarez Alvarez, M. and Bustamente, F. D.
A PLANT FOR THE MANUFACTURE OF STEEL BY THE L. D. PROCESS Sept 62.
Order from BISI £3 15s BISI-2542

Trans. of Anales de Mecanica y Electricidad (Spain) 1959 [ser. 2, v. 36, no. 6] p. 452-463.

DESCRIPTORS: *Industrial plants, *Steel, Manufacturing methods.

Andrievskii, R. A. and Fedorchenko, I. M.
ACTIVATED SINTERING OF IRON POWDER. Oct 62.
Order from HB $2.50 HB-5531

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 12, p. 36-39.

DESCRIPTORS: *Powder metals, *Iron, Powders, *Sintering, Powder metallurgy.

Assonov, A. D.
DEVELOPMENT PERSPECTIVES FOR HEAT-TREATMENT TECHNOLOGY. Oct 62.
Order from HB $3.00 HB-5534

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 44-49.

DESCRIPTORS: Metallurgy, Automation, *Heat treatment, Induction heating, Heating, Economics.

Balandin, Yu. F.
INVESTIGATION OF THE PROLONGED EFFECT OF CYCLIC THERMAL STRESSES AT HIGH TEMPERATURES. 1962, 7p. 8 refs.
Order from MUL $7.75 MUL-T62-4

Trans. of Metallov i Metallovedenie (USSR) [sic] 1961, v. 12, no. 4, p. 519-525.

DESCRIPTORS: *Heat-resistant materials, High temperature research, *Thermal stresses, Fatigue (Mechanics), Temperature.

Berenshtein, L. E.
CHEMICAL-SPECTROGRAPHIC METHOD FOR THE DETERMINATION OF NIOBIUM IN ORES AND SIMILAR MATERIALS. Oct 62, 500 words.
Order from HB $2.50 HB-5736

Trans. of #Zavodskaya Laboratoriya (USSR) 1962, v. 28, no. 8, p. 940-941.

DESCRIPTORS: *Ores, *Niobium, Determination, Chemical analysis, Spectrographic analysis.

Blum, H.
MEASURES FOR GRAIN REFINEMENT IN PHOSPHATING. 14 Nov 62, 1250 words.
Order from TTIS $10.00 TTIS PN 82

Trans. of Forschunsges[ellschaft] Blechverarbeitung e.V. Mitt[eilungen] (West Germany) 1961, no. 21/22, p. 294-296.

DESCRIPTORS: *Phosphates, Grains (Metallurgy), Measurement.

Bohnen, J. K.
THE GEOMETRICAL ASPECTS OF ELECTRIC RESISTANCE WELDING OF TUBES. Nov 62.
Order from BISI £8 BISI-2977

Trans. of Blech (West Germany) 1961, v. 8, [no. 10] p. 740-744.

DESCRIPTORS: *Electric welding, Resistance, Pipes, Geometry.

Bonzel, M.
WIRE DRAWING. [1962] 11p. (formulae figs. refs. omitted).
Order from SLA $1.60 62-16935

Trans. of Métaux (Corrosion-Industries) (France) 1952, v. 27, no. 320, p. 143-149.

DESCRIPTORS: *Wire, *Drawing (Machine processing), *Copper wire, *Steel wire, Stresses, Dies, Heat treatment, Mechanical properties, Surface tension.

Bulyshev, D. K. and Beresnev, B. I.
EXTRUSION OF CAST IRON BY HYDROSTATIC PRESSURE. Oct 62, 800 words.
Order from HB $2.80 HB-5713

Trans. of #Fiz[ika] Met[allov] i Metalloved[enie] (USSR) 1962, v. 13, no. 6, p. 942-944.

DESCRIPTORS: *Cast iron, Iron, *Extrusion, *Hydrostatic pressure, Pressure, Metallurgy, Hardness, Microanalysis.

Butkova, S.
SINGLE-STAGE (DIRECT) PRODUCTION OF SILICO-CHROMIUM. Oct 62, 2700 words.
Order from HB $8.80 HB-5701

Trans. of Hutnik (Czechoslovakia) 1962, v. 12, no. 6, p. 293-295.

DESCRIPTORS: *Chromium alloys, *Silicon alloys, Production, Ores, Furnaces.

Chervyakov, F. Ya.
PROGRESSIVE HEAT-TREATING METHODS AT THE "KRASNYI PROLETARII" WORKS. Oct 62.
Order from HB $2.50 HB-5535

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 49-52.

DESCRIPTORS: Industrial plants, Metallurgy, Automation, *Heat treatment, Labor, Machine tool, Production.

Dedek, V. and Zidek, M.
HOT AND COLD STRIP ROLLING OF STEELS FOR DYNAMO SHEETS. Sep 62.
Order from MT $30.25 MT Trans-248

Trans. of Hutnicke Listy (Czechoslovakia) 1962, v. 17, no. 2, p. 101-110.

DESCRIPTORS: *Steel, Sheets, *Rolling mills, Dynamotors.

Deryagin, B. V., Ermin, V. N. and others.
DETERMINATION OF THE SPECIFIC AREA OF POWDERS IN THE PRODUCTION OF HARD ALLOYS. 13 Nov 62 [11]p. 8 refs. JPRS: 16167.
Order from OTS or SLA $1.10 63-13074

Trans. of Tsvetnye Metally (USSR) 1959 [v. 32] no. 11, p. 55-60.
A rough draft trans. is available from OTS or SLA $1.60 as 61-19789, MCL-618, 4 Nov 60 [15]p.

DESCRIPTORS: *Powder alloys, *Powders, *Surface area, Gases, Porosity, Diffusion, Particles.

For abstract see Technical Translations 6:609, 1961.

Engell, H.-J.
THE ADHESION OF SURFACE LAYERS ON METALS. Nov 62. 13 refs.
Order from BISI £3 15s BISI-3018

Trans. of Werkstoffe und Korrosion (West Germany) 1960, v. 11 [no. 3] p. 147-151.

DESCRIPTORS: *Metals, *Bonding, Adhesion, Surface properties, Crystal structure, Lattices, Plasticity.

Eremenko, V. N. and Lesnik, N. D.
INFILTRATION OF POROUS TITANIUM CARBIDE WITH COBALT, NICKEL AND COPPER-COBALT OR COPPER-NICKEL ALLOYS. Oct 62, 2500 words.
Order from HB $7.30 HB-5579

Trans. of Poroshkovaya Metallurgiya (USSR) 1961, v. 1, p. 43-49.

DESCRIPTORS: *Titanium compounds, *Carbides, Impregnation, *Cobalt, *Nickel, *Copper alloys, Reaction kinetics.

Fal'kevich, A. S. and Khusanov, M. Kh.
FURTHER DEVELOPMENT OF THE MAGNETOGRAPHIC METHOD OF WELD INSPECTION. Oct 62, 2100 words.
Order from HB $4.20 HB-5728

Trans. of #Svarochnoe Proizvodstvo (USSR) 1962, no. 7, p. 25-28.

DESCRIPTORS: Welding, *Welds, Test methods, Magnetic fields, Magnetometers, Optical images.

Farran, J.
ROTATING ANODE FOR THE ELECTROLYTIC POLISHING OF Cd AND Al. 11 May 49, 4p. (fig. refs. omitted).
Order from SLA $1.10 62-16991

Trans. of Metaux [Corrosion-Industries] (France) 1948, v. 23, no. 269, p. 9-11.

DESCRIPTORS: *Electrolytic polishing, *Anodes (Electrolytic cell), Rotation, *Cadmium, Aluminum.

Figel'man, M. A.
ELECTROPLATED CONSTRUCTIONAL STEELS. Oct 62.
Order from HB $3.25 HB-5529

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 21-25.

DESCRIPTORS: *Steel, *Electroplating, Cadmium plating, *Zinc plating, Physical properties.

Finkelnburg, H. H.
MODERN METHODS FOR MECHANICAL FINE FINISHING OF METALS. [1962] 7p. (figs. refs. omitted).
Order from SLA $1.10 62-16989

Trans. of Metall (West Germany) 1954, v. 8, June, p. 459-462.

DESCRIPTORS: *Metals, *Precision finishing, Machine tools, Machining, Casting, Surfaces, Ultrasonics.

Frantzen, H.
POWDER METALLURGICAL PROCESSES IN THE MANUFACTURE OF WIRE. [1962] 8p. (refs. omitted).
Order from SLA $1.10 62-16950

Trans. of Draht (West Germany) 1954, v. 5, no. 2, p. 50-53.

DESCRIPTORS: *Wire, Manufacturing methods, *Powder metallurgy, Processing.

Garcia Verduch, Antonio.
PRESENT CONCEPTS OF THE PHENOMENON OF SINTERING. 30 Oct 56, 31p. 25 refs.
Order from SLA $3.60 62-16749

Trans. of Instituto del Hierro y del Acero (Spain) 1955, v. 8, p. 136-148.

DESCRIPTORS: *Sintering, Ceramic materials, Powder metallurgy, Ions, Crystals, Impurities, Temperature, Soldering, Velocity, Gases.

After defining the phenomenon of sintering and pointing out its technical interest in ceramics and powder metallurgy, the author explains the fundamental mechanisms of the sintering of a compact. The influences which may effect sintering speed, in case of ionic crystals, are analyzed as well as that of reticular ionic impurities, in view of present knowledge of solids. The interactions between the particles at temperatures much lower than Tamman's is shown by means of some recent experiments. The process of pressing and the role played by the gas occlusions in the compact are also the object of a summary revision. Finally some special cases have been presented in which it is possible to modify the sintering speed by using a chemical transformation or phase change of the solid used. (Author)

Gerlach, W.
MAGNETIC INVESTIGATION OF THE PRECIPITATION HARDENING OF NICKEL-BERYLLIUM ALLOYS. [1962] 6p. (figs. tables omitted).
Order from SLA $1.10 62-18346

Trans. of Z[ei]ts[chrift] f[ür] Metallkunde (Germany) 1936 [v. 28, no. 4] p. 80-83.

DESCRIPTORS: *Beryllium alloys, *Nickel alloys, Temperature, Magnetic properties, *Heat treatment, Electrostatic precipitation, Hardening, *Magnets, Ferromagnetic materials.

Gerlach, W.
THE MAGNETIC PROPERTIES OF PRECIPITATION HARDENED Ni-Be ALLOYS. [1961] 10p. (figs. tables omitted).
Order from SLA $1.10 62-18345

Trans. of Z[ei]ts[chrift] f[ür] Metallkunde (Germany) 1936, v. 28 [no. 7] p. 183-188.

DESCRIPTORS: *Beryllium alloys, *Nickel alloys, Magnetic properties, Heat treatment, Temperature, Electrostatic precipitation, Hardening.

Göderitz, A. H. F.
THE DEVELOPMENT OF NICKEL SULFATE UPON THE EXPOSURE OF PURE NICKEL TO SO_2 AND H_2S. 1 Mar 48, 4p. (figs. tables omitted).
Order from SLA $1.10 62-18340

Trans. of Z[ei]ts[chrift] f[ür] Metallkunde (Germany) 1942, v. 34 [no. 8] p. 193-195.

DESCRIPTORS: *Hydrogen compounds, *Sulfides, Dioxides, Sulfur compounds, *Nickel, Exposure, *Nickel compounds, Sulfates, Gases, *Silver.

By laboratory experiments as well as plant tests, it has been shown that upon exposure of pure nickel or Ni-containing metals to the action of SO_2 and H_2S in the gaseous condition (each gas by itself or in a mixture of the two) tightly adhering $NiSO_4$ is formed. Even with comparatively slight concentrations of SO_2 in the air of an Mg-foundry, this process was quite evident. (Author)

Goman'kov, V. I. and others.
NEUTRON-DIFFRACTION STUDY OF NICKEL-CHROMIUM ALLOYS. Oct 62, 1500 words.
Order from HB $3.50 HB-5735

Trans. of #Fizika Metallov i Metallovedenie (USSR) 1962, v. 14, no. 1, p. 26-29.

DESCRIPTORS: *Nickel alloys, *Chromium alloys, *Neutron diffraction analysis, Magnets, Cryostats, Magnetic moment.

Gorissen, H.
HIGH FREQUENCY TUBE WELDING WITH ENERGY TRANSMISSION THROUGH CONTACTS. Nov 62.
Order from BISI £3 BISI-2946

Trans. of Schweissen und Schneiden (West Germany) 1962 [v. 14] no. 2, p. 69-71.

DESCRIPTORS: *Welding, Electric welding, High frequency, Pipes.

Gutkin, B. G., Levinson, E. N. and others.
PRODUCTION ENGINEER'S HANDBOOK. 16 Oct 61 [22]p. 7 refs. FTD-TT-61-6. AD-266 751.
Order from OTS or SLA $2.60 62-13912

Trans. of mono. Spravochnik Tekhnologiya: Mashinostroitela, v. 1, n.p., 1958, p. 403 and 424-430.

DESCRIPTORS: *Handbooks, *Metallurgy, Metals, Processing, Electrochemistry, Electrolytic polishing, Machining, Heating, Electrolytes, Anodes (Electrolytic cell), Spark machining.

Electrical and chemical-mechanical means of processing metals are described.

Hardwick, D. and Tegart, W. J.
THE DEFORMATION OF METALS AND ALLOYS BY TORSION AT HIGH TEMPERATURES. Nov 62.
Order from BISI £5 BISI-2995

Trans. of Revue de Métallurgie. Mémoires Scientifiques (France) 1961, v. 58 [no. 11] p. 869-880.

DESCRIPTORS: *Metals, *Alloys, Deformation, Temperature.

Hohn, J. and Pavlik, O.
THE ADDITION OF FUEL OILS TO THE BLAST IN A BLAST FURNACE AT THE KLEMENT GOTTWALD WORKS IN VITKOVICE. Sep 62.
Order from MT $17.80 MT Trans-253

Trans. of Hutnik (Czechoslovakia) 1962, v. 12, no. 3, p. 144-147.

DESCRIPTORS: *Blast furnaces, *Fuel oil, Industrial plants, Czechoslovakia.

Hotop, W.
THE SPECIAL POSITION OF POWDER-METALLURGY IN THE PRODUCTION OF PERMANENT-MAGNETS. Contribution to the Group "Powder Metallurgy" of the International Mechanical Engineering Congress, Stockholm, 4-10 June 52. [1962] 16p. (figs. tables omitted) 6 refs.
Order from SLA $1.60 62-16965

Trans. of Metall (West Germany) 1953, v. 7 [no. 1] p. 1-9.

DESCRIPTORS: *Powder metallurgy, Magnetic materials, Aluminum alloys, *Magnets, Nickel alloys, Cobalt alloys, Mechanical properties, Production, Sintering, Casting.

Jansch, F. and Strobl, R.
THE FIRST CONTINUOUS CASTING PLANT FOR STEEL IN CZECHOSLOVAKIA. Sep 62.
Order from MT $28.25 MT Trans-252

Trans. of Hutnik (Czechoslovakia) 1962, v. 12, no. 3, p. 108-115.

DESCRIPTORS: *Steel, *Castings, *Industrial plants, Czechoslovakia.

Jegaden, G., Voinchet, J., and Rocquet, P.
CONTRIBUTION TO THE STUDY OF THE PLASTIC DEFORMATION OF SHEET MATERIALS. Nov 62.
Order from BISI £5 10s BISI-3015

Trans. of Revue de Métallurgie. Mémoires Scientifiques (France) 1962, v. 59 [no. 4] p. 273-285.

DESCRIPTORS: *Metal plates, Sheets, Tensile properties, *Plasticity, *Deformation.

Jellinghaus, W.
THE MAGNETIZATION PROCESS IN THE CASE OF IRON-NICKEL-ALUMINIUM-COBALT-AND COPPER-MAGNET ALLOYS WITH A PREFERRED DIRECTION. 25 Apr 59, 8p. (figs. tables omitted).
Order from SLA $1.10 62-18351

Trans. of Zeits[chrift] f[ür] Metallkunde (West Germany) 1948, v. 39, no. 2, p. 52-56.

DESCRIPTORS: *Magnetic alloys, Copper alloys, Cobalt alloys, Aluminum alloys, Nickel alloys, Iron alloys, Heat treatment, Magnetic fields, *Magnets, *Magnetism.

Starting with a completely non-magnetic state, internal magnetization curves are obtained with small fields which with amplitudes of less than H_C in the preferred direction, show less magnetization than in the transverse direction and above H_C, the reverse is true. In the transverse direction, even with very strong fields, no appreciable permanent magnetization can be obtained. In the preferred direction, the magnetization from the non-magnetized state occurs for the post part, through irreversible 180° wall displacements; in the transverse direction, mostly, through reversible rotation processes. The difference in the coercive force between the preferred and transverse directions is probably due to the different values of the crystal energy. (Author)

Jesnitzer, F. E.
THE EFFECT OF THE WELDING TIME IN SPOT WELDING OF ALUMINIUM ALLOYS. 29 Mar 50, 16p. (figs. tables omitted) 19 refs.
Order from SLA $1.60 62-18350

Trans. of Zeitschrift für Metallkunde (West Germany) 1948 [v. 39, no. 10] p. 303-312.

DESCRIPTORS: *Aluminum alloys, *Spot welding, Spot welds, Welded joints, Electrodes, Time.

Weld seams on single-notched spot-welds produced with various periods of welding and intensities of welding current, using six different aluminium-magnesium alloys, have been investigated with respect to strength and structure. Accordingly, with long welding times of 20, 30 and more cycles duration (corresponding to 1/3, 1/2 and more seconds), weld seams were obtained which were entirely free from cracks and pores, in joints with convex electrode pressure-areas and relatively high electrode pressures, consideration being given to sheet-thickness and rigidity. The grid-controled machine with rectangular envelope curve for the current-time course proved to be definitely less favorable than the cascade-controled machine with a sinusoidal curve, with respect to the tendency toward sticking of the electrode to the sheet during these comparatively long welding periods and the same strength of spot-weld. Longer welding periods using grid-controled machines in practice led to impairment of the glass tubes while the cascade-controled machines prevented damage. Longer welding times for the case in question did not cause any greater number of rejects on account of increased heat-stresses, and it appeared to be feasible to use the range of longer welding times for improvement of the quality of the spot-weld. With reference to crack- and pore-formation in the technical aluminium-magnesium alloys, the increase in the magnesium- and manganese content is unfavorable, the increase of the silicon content, on the other hand, is favorable. Construction data are given for an improved rod-electrode. (Author)

Karasevich, V. I. and Prikhod'ko, V. Ye.
NEW DEVELOPMENTS IN THE PRODUCTION OF ALCLAD IRON. [1960] 11p. 10 refs. MDF K-242.
Order from OTS $0.50 62-11322

Trans. of Tsvetnye Metally (USSR) 1959, v. 32, no. 10, p. 68-75.
Another translation is available from BISI £5 5s, as BISI-1781 [1960] 11p.

DESCRIPTORS: *Iron, Coatings, Silicon, *Aluminum coatings, Production, Annealing, Cleaning, Metallurgical analysis.

A progressive technology of producing Alclad iron tape developed by a factory engaged in processing non-ferrous metals has permitted an increase of several times in the productivity of equipment, a reduction in the net cost and a greater than twenty-fold rise in the unit weight of the processed blank. The formation of an intermediate $FeAl_3$ layer under the effect of reactive diffusion of the iron of the core into the aluminum of the coating is independent of the quantity of carbon in the steel blank. The layer appears for both a low (0.03%) and a high (0.12%) carbon content. Replacement of the Armco-A iron as the bimetal core by the low-carbon Armco-OM steel and layer by the O8KP-OM steel guaranteed the application of the progressive technology of fabricating Alclad iron. Coating the core by an aluminum-silicon alloy and the use of charging annealing permitted the prevention of the effect of reactive diffusion, which is manifest as the formation of an intermediate layer of the chemical compound $FeAl_3$ and the quality of the items of Alclad iron was thus improved. (Author)

Kahlhöfer, H., Send, A., and Pfrötscher, G.
THE EFFECT OF PRE-TREATMENT OF THE CHARGE IN BLAST FURNACE OPERATION. [1960] [25]p.
Order from SLA $2.60 62-16881

Trans. of [Stahl und Eisen (West Germany) 1959, v. 79 [no. 21] p. 1461-1471] (Verein Deutscher Eisenhüttenleute (West Germany). Berichte-326)
Another trans. is available from BISI £7 as BISI-1492 [1960].

DESCRIPTORS: *Blast furnaces, Operation, Sintering, Coke, Fuel consumption, *Cast iron, Production.

For abstract see Technical Translations 4: 175, 1960

Khil'ko, M. M. and Shklyar, M. S.
FIRING AND O. H. FURNACE WITH A MIXTURE OF COKE-OVEN AND NATURAL GASES. Sep 62.
Order from MT $8.25 MT Trans-229

Trans. of #Metallurg (USSR) 1961, v. 6, no. 7, p. 11-13.

DESCRIPTORS: *Furnaces, *Coke, Gases, *Natural gas, Open hearth furnaces.

Kobylyakov, I. I.
ON THE PROBLEM OF THE EFFICIENCY OF THE OXYGEN CONVERTER STEELMAKING PROCESS.
29 Nov 62 [12]p. 7 refs. JPRS: 16417
Order from OTS or SLA $1.60 63-13322

Trans. of Izvestiya Vysshikh Uchebynykh Zavedenii. Chernaya Metallurgiya (USSR) 1962, no. 8, p. 200-206.

DESCRIPTORS: *Furnaces, Oxygen, *Steel industry, *Industrial production, Economics, Steel, Smelting.

Koch, L., Hein, G., and Keste, S.
EXAMPLES OF APPLICATIONS OF NEW TECHNIQUES IN METALLOGRAPHY. [1962] 12p. (figs. omitted) 20 refs.
Order from SLA $1.60 62-16839

Trans. of Metall (West Germany) 1957, v. 11, no. 12, p. 1038-1045.

DESCRIPTORS: *Metallurgy, Electrolytic polishing, Photoengraving, Stresses, Corrosion, Microanalysis, Light, Polarization, Color photography, Grinders.

Krautkrämer, Josef.
ULTRASONIC DETERMINATION OF THE SIZE OF DEFECTS. [1960] [22]p. 7 refs.
Order from SLA $2.60 62-16847

Trans. of Archiv für das Eisenhuttenwesen (West Germany) 1959, v. 30, no. 11, p. 693-703 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-1211).
Another trans. is available from BISI £7 15s as BISI-1566 [1960].

DESCRIPTORS: *Metal plates, *Ultrasonics, Test methods, *Non-destructive testing.

Proposals for the standardisation of ultrasonic data using echo height for drawing up standard series and specifications for comparing small defects with artificially induced defects of given sizes. Free choice of instruments, probes, frequencies and a reference plate cut from the same material as the test piece. Determination of defect size in the near and far field. Use of special probes for the near field. Allowance for the influence of curved surfaces.

Krichmar, S. I.
ON THE POLARIZATION MECHANISM OF THE SUPPRESSION OF STRUCTURAL ETCHING IN ELECTROCHEMICAL POLISHING. [1959] 6p. 12 refs, MDF K-194.
Order from OTS $0.50 62-11306

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1959, v. 124, no. 3, p. 621-624.

DESCRIPTORS: *Electrochemistry, *Electrolytic polishing, Metals, Surface properties, Microstructure, Electrolytes, Polarization, Electrodes.

L'vov, S. N. and others.
THERMAL CONDUCTIVITY OF HIGH-MELTING BORIDES, CARBIDES AND NITRIDES. Sep 62, 1300 words.
Order from HB $3.90 HB-5555

Trans. of Poroshkov[aya] Metallurgiya (USSR) 1961 [v. 1] no. 6, p. 70-74.

DESCRIPTORS: Titanium compounds, Vanadium compounds, Chromium compounds, Zirconium compounds, Hafnium compounds, Niobium compounds, Tantalum compounds, Molybdenum compounds, *Nitrides, *Carbides, *Borides, *Thermal conductivity.

Madatov, N. M.
COVERED ELECTRODES, THE COVERINGS CONTAINING IRON POWDER, FOR UNDERWATER WELDING. Oct 62, 1900 words.
Order from HB $4.75 HB-5692

Trans. of #Svarochnoe Proizvodstvo (USSR) 1962, no. 8, p. 14-16.

DESCRIPTORS: *Underwater welding, *Welding rods, Electrodes, Protective coverings, *Powder metals, Iron.

Maksimov, V. L.
RAPID BURNING IN OF AN O. H. FURNACE HEARTH. Sep 62.
Order from MT $4.90 MT Trans-222

Trans. of #Metallurg (USSR) 1961, v. 6, no. 6, p. 17-18.

DESCRIPTORS: *Open hearth furnaces, Combustion, Velocity.

Maksimovich, B. I.
CONDITIONS LEADING TO THE ORIGINATION OF A CONSTANT CURRENT COMPONENT DURING ELECTROSLAG RESMELTING IN WATER-COOLED CASTING MOLDS 1 (Usloviya Voziknoveniya Postoyannoi Sostavliyayushchei Toka Pri Elektro-Shlakovom Pereplave v Vodookhlazhdaemykh Izlozhnitsakh).
4 Dec 61 [12]p. (8 figs. omitted) 9 refs. MCL-1387; AD-270 247.
Order from OTS or SLA $1.10 62-15801

Unedited rough draft trans. of #Avtomaticheskaya Svarka (USSR) 1961 [v. 14] no. 4, p. 47-53.

DESCRITPROS: Electric currents, Stability, *Electric arcs, Slags, *Melting, Metals, Water, Cooling, Casting, Crucibles

The cause for the development of a constant current

component during electroslag casting of ingots in water-cooled casting molds is discussed. This phenomenon pertains also to the manufacture of fluxes in flux smelting single-phase electric furnaces with graphite electrodes. A method is introduced for the elimination of this component and possible fields of its application during electroslag smelting are described. (Author)

Nemnonov, S. A. and Klyushin, 'V. V.
INVESTIGATION OF L_{III} ABSORPTION SPECTRA OF CERIUM IN CERIUM-ALUMINUM ALLOYS. [1959] 3p. 3 refs.
Order from OTS $0.50 62-11388

Trans. of #Fiz[ika] Met[allov] i Metall[ovedenie] (USSR) 1958, v. 6, no. 5, p. 951-952

DESCRIPTORS: *Aluminum alloys, *Cerium alloys, *Spectrographic analysis, Cerium, Intermetallic compounds, Atomic Structure.

Experimental results are described which indicate that the fundamental contribution to the formation of interatomic bonds in the intermetallics $CeAl_2$ and $CeAl_4$ from the cerium atoms is introduced by the 6s and 5d states.

Nishimura, S. and others.
ELECTRODEPOSITION OF TANTALUM METAL IN FUSED SALT BATHS WITH THE USE OF TANTALUM PENTOXIDE AND POTASSIUM FLUOTANTALATE. Aug 62, 2600 words.
Order from HB $9.75 HB-5114

Trans. of [Nihon Kogyo Kaishi] (Japan) 1961, v. 77, p. 49-56.

DESCRIPTORS: Electrolysis, *Tantalum compounds, *Oxides, Tantalum plating, Production, *Potassium compounds, *Fluorides, *Electrodeposition.

Opel, P. and Ivens, G.
DETERMINATION OF DEFECT SIZE IN FORGINGS BY AN ULTRASONIC TECHNIQUE. Oct 62, 3900 words.
Order from HB $9.75 HB-5655

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1962, v. 33, no. 5, p. 311-316.

DESCRIPTORS: *Non-destructive testing, *Ultrasonics, *Castings, Deformation, Determination, Nomograms, Forging.

Pacyna, H.
THE FLAVEN FURNACE, AN OIL-FIRED REVERBERATORY SHAFT FURNACE FOR (GRAY-IRON) FOUNDRIES. Oct 62, 3900 words.
Order from HB $9.75 HB-5695

Trans. of Giesserei (West Germany) 1962, v. 49, no. 15, p. 417-421.

DESCRIPTORS: *Oil burning furnaces, *Foundries, *Iron, Fuel consumption, Waste gases, Design, Operation, Melting, Control systems.

Pahlitzsch, G.
DEEP COOLING IN METAL MACHINING [Tiefkühlen bei der Metallzerspanung]. [1962] 11p. (figs. table, refs. omitted).
Order from SLA $1.60 62-18236

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschr[ift] (Germany) 1944, v. 88, no. 27/28, p. 365-371. Another trans. is available from SLA mi$2.40, ph$3.30 as 59-20107 [1946] [17]p.

DESCRIPTORS: *Metals, Machining, *Machine tools, Cooling, *Refrigeration systems, Lathes, Lubrication.

Pasek, V.
CURVES OF STRAIN HARDENING DURING COLD MECHANICAL WORKING. Sep 62.
Order from MT $15.65 MT Trans-240

Trans. of Hutnicke Listy (Czechoslovakia) 1961, v. 16, no. 11, p. 803-806.

DESCRIPTORS: *Metals, Hardening, Stresses, Manufacturing methods.

Peukert, H.
HOT-GAS WELDING OF RIGID- AND PLASTICIZED POLYVINYL CHLORIDE. [1962] 17p. (figs. tables omitted) 4 refs.
Order from SLA $1.60 62-16999

Trans. of Kunststoffe (West Germany) 1955, v. 45, no. 7, p. 257-266.

DESCRIPTORS: *Vinyl chlorides, *Polymers, *Welding rods, *Welded joints, *Welding, *Plasticizers, Mechanical properties, Bonding, Impurities, Decomposition

Some problems on the hot-gas welding of rigid- and plasticized polyvinyl chloride with filler-wire and discussed. The influence of the welding-wire composition on the strength of the weld-seam is especially studied and the most favorable working conditions for welding are ascertained. (Author)

Polovchenko, I. G. and Gladkin, M. M.
ERRORS IN THE CONTROL OF THE GAS FLOW AND THE DISTRIBUTION OF MATERIALS IN THE THROAT. Sep 62.
Order from MT $17.25 MT Trans-236

Trans. of #Metallurg (USSR) 1961, v. 6, no. 11, p. 3-8.

DESCRIPTORS: *Furnaces, *Gas flow, Control, Materials, Distribution.

Revinov, V. N.
DEEP-DRAWING OF PARTS FROM HEAT-RESISTING SHEET METALS WITH THE USE OF DEEP COOLING. [Paper presented at Conference on Heat Resisting Alloys held in Moscow, Dec 57]. Nov 61 [7]p. (figs. omitted) 7 refs. [DSIR NLL] M. 3655.
Order from OTS or SLA $1.10 62-25300

Trans. of mono. Obrab[otka] Zharoproch[nykh] Splavov [The Working of Heat-Resisting Alloys, Moscow] 1960, p. 53-58.
Another trans. is available from BISI £3 15s as BISI-2552 [1962].

DESCRIPTORS: *Heat resistant alloys, Sheets, Cooling, Drawing (Machine processing).

Rybochkin, G. F.
REPAIR OF BLAST FURNACE BIG BELLS. Sep 62.
Order from MT $6.80 MT Trans-251

Trans. of #Metallurg (USSR) 1962, v. 7, no. 2, p. 14-15.

DESCRIPTORS: *Blast furnaces, Maintenance.

Scharf, G., Awerin, W. W. and others.
THE EFFECT OF SILICON ON THE SOLUBILITY AND ACTIVITY OF OXYGEN IN LIQUID NICKEL. [1962] 10p.
Order from ATS $11.40 ATS-15P63G

Trans. of Bergakademie (West Germany) 1959, v. 11, no. 12, p. 699-703.

DESCRIPTORS: *Liquid metals, Metals, *Nickel, *Oxygen, Solubility, Chemical reactions, *Silicon, Metallurgy.

Schenck, H. and others.
CALCULATION OF THE ACTIVITIES OF CARBON AND ALUMINUM IN THE IRON-CARBON-ALUMINUM SYSTEM AT 1600°C USING A DIGITAL COMPUTER. Pt. 2 of On the Activity of Carbon in Liquid Iron Alloys. Oct 62, 2100 words.
Order from HB $5.25 HB-5584

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1962, v. 33, no. 4, p. 229-232.

DESCRIPTORS: *Iron alloys, Liquid metals, *Carbon alloys, *Aluminum alloys, Metallurgy, Mathematical analysis, Digital computers, Scheduling.

Schenck, H. and Schulz, H. P.
KINETICS OF INDIRECT REDUCTION. Nov 62.
Order from BISI £7 15s BISI-2635

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1960, v. 31 [no. 12] p. 691-702.

DESCRIPTORS: *Ores, *Single crystals, Reduction, Reaction kinetics, Fracture (Mechanics).

Schneider, R.
CALCULATION OF TIME REQUIRED FOR THE PURGING OF ANNEALING FURNACES WITH A CONTROLLED ATMOSPHERE. Oct 62, 1700 words.
Order from HB $3.90 HB-5702

Trans. of Stahl und Eisen (West Germany) 1962, v. 82, no. 14, p. 963-966.

DESCRIPTORS: *Furnaces, *Annealing, *Controlled atmospheres, Mathematical analysis.

Sorokin, V. K.
EFFECT OF COPPER AND GRAPHITE ON PROPERTIES OF SINTERED IRON-BASE ALLOYS. Oct 62.
Order from HB $2.50 HB-5533

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 12, p. 42-43.

DESCRIPTORS: *Iron alloys, Alloys, Tensile properties, *Copper, *Graphite, Metallurgy.

Starshinov, B. N. and others.
OPERATION OF A BLAST FURNACE WITH THE ADDITION OF NATURAL GAS TO THE BLAST. Sep 62.
Order from MT $14.35 MT Trans-228

Trans. of #Metallurg (USSR) 1961, v. 6, no. 7, p. 4-8.

DESCRIPTORS: *Blast furnaces, Operation, *Natural gas.

Stauffer, W.
THE PROPERTIES OF HIGH ALLOY ROTORS FOR STEAM AND GAS TURBINES. June 62.
Order from BISI £6 10s BISI-2512

Trans. of mono. (paper) presented at the Conference on Heavy Forging, Terni, Sep 61.

DESCRIPTORS: *Steam turbines, *Gas turbines, *Steel, Creep, *Alloys, Stresses, *Rotor blades, Rupture.

Stepanov, Yu. A.
EFFECT OF MOLD FRICTION ON THE FORMATION OF HOT TEARS IN CASTINGS. Oct 62, 2600 words.
Order from HB $7.80 HB-5339

Trans. of Izvest[iya] V[ysshikh] U[chebnykh] Z[avedenii]. Mashinostroenie (USSR) 1960, no. 4, p. 86-94.

DESCRIPTORS: *Castings, *Steel, *Iron, *Aluminum alloys, Dies, Friction.

Tarasov, V. P.
THE CHANGE IN THE PARAMETERS OF CHARGING THE BURDEN ON INCREASING THE GAS PRESSURE IN THE SHAFT. Sep 62.
Order from MT $7.55 MT Trans-237

Trans. of #Metallurg (USSR) 1961, v. 6, no. 12, p. 2-4.

DESCRIPTORS: *Furnaces, Gases, Pressure.

Trillat, J. J. and Saison, J.
STUDY OF PHOSPHATING FILMS WITH X-RAYS AND ELECTRONIC DIFFRACTION. Nov 62. 21 refs.
Order from BISI £3 5s BISI-2787

Trans. of Revue de Métallurgie. Mémoires Scientifiques (France) 1961, v. 58 [no. 7] p. 496-502.

DESCRIPTORS: *Thin films, *Phosphate coatings, Zinc, X-ray diffraction analysis, Electron diffraction analysis.

Verte, L. A.
CONTROL OF THE TAPPING OF LIQUID PIG IRON BY MEANS OF A TRAVELLING MAGNETIC FIELD. Sep 62.
Order from MT $8.35 MT Trans-238

Trans. of #Metallurg (USSR) 1961, v. 6, no. 12, p. 6-8.

DESCRIPTORS: *Liquid metals, *Iron, Control, Magnetic fields, Cast iron.

Yudkovskii, S. I., Eikhmans, E. F. and others.
TITANIUM-BORIDE-BASE ALLOYS FOR CUTTING TOOLS. 15 Nov 62 [13]p. 7 refs. JPRS: 16202.
Order from OTS or SLA $1.60 63-13099

Trans. of #Vestnik Mashinostroeniya (USSR) 1962 [v. 42] no. 8, p. 44-47.

DESCRIPTORS: *Cutting tools, *Titanium alloys, *Borides, Carbides, Iron alloys, Cobalt alloys, Nickel alloys, Alloys, Sintering, Physical properties, Mechanical properties.

Zlatnik, I.
THE EFFECT OF HYDROGEN ON THE MECHANICAL PROPERTIES OF LARGE CrNiMo STEEL FORGINGS. Sep 62.
Order from MT $36.00 MT Trans-199

Trans. of Hutnicke Listy (Czechoslovakia) 1961, v. 16, no. 5, p. 325-335.

DESCRIPTORS: *Chromium alloys, *Nickel alloys, *Molybdenum alloys, *Steel, Hydrogen, Mechanical properties, Castings, Hydrogen embrittlement.

Ferrous Metals

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 86. 16 Nov 62 [66]p. JPRS: 16212.
Order from OTS or SLA $6.60 63-13102

Trans. of Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1962 [v. 16] no. 8, p. 54; no. 9, p. 55-56; Nauchno-Tekhnicheskie Obshchestva (USSR) 1962 [v. 4, no. 9] p. 17-22; and from Pravda Ukrainy (USSR) 1962, 15 July, p. 3; Pravda, Moscow (USSR) 1962, 25 Aug, p. 2; Komsomol'skaya Pravda (USSR) 1962, 11 Sep, p. 1; Sovetskaya Rossiya (USSR) 1962, 8 Aug, p. 1; 15 Aug, p. 3; 21 Aug, p. 1; Ekonomicheskaya Gazeta (USSR) 1962, no. 39[60] p. 4 and 18; Izvestiya (USSR) 1962, 26 Sep, p. 3.

DESCRIPTORS: *Industrial production, Iron, Metallurgy, Economics, *Automation, Machines, Industrial plants, *Blast furnaces, *Fuel oil, *Natural gas, Industrial research, Mining engineering, Personnel, Iron castings, *Foundries, Pipes, Rolling mills, Conferences, Transport.

Contents:
Metallurgy in the Ukraine, by N. Kardasevich and V. Khodakovskii
Mechanization of labor-consuming processes in ferrous metallurgy
Recent activities of the Institute of Metallurgical Machine Building
Delays in the development of the Kuznetsk metallurgical combine, by E. Salov
For low-cost blast-furnace fuel, by Yu. Borisov
At the Kuznetsk metallurgical combine, by V. Kalachinskii
Increasing the output of steel at the Kuznetsk combine, by V. Balin and others
Introducing natural gas at the Cherepovets metallurgical plant, by Yu. Molchanov and others
Scientific and technical progress in ferrous metallurgy, by N. Dubrov and V. Levitin
The scientific and technical society at the Sarbai ore mine, by V. Tananvkin and G. Silant'ev
Performance of the Donetsk metallurgical plant, by I. Ektov
Shortage of iron castings in the Kievskii sovnarkhoz, by I. Georievskii
Problems of the Bezhitskii steel foundry
New equipment at the Chelyabinsk tube rolling plant, by Ya. Osadchii
Seminar on mechanization and automation of loading and unloading operations at metallurgical plants.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET FERROUS METALLURGY NO. 39. 9 July 62 [29]p. JPRS: 14410.
Order from OTS or SLA $2.60 63-13094

Trans. of #Metallovedenie i Termicheskaya Obrabotka Metallov (USSR) 1961, no. 12, p. 46-47; and from Ekonomicheskaya Gazeta (USSR) 1962, no. 11(32) p. 14-15; Pravda, Moscow (USSR) 1962, 10 Feb, p. 2.

DESCRIPTORS: *Industrial production, *Iron, Metallurgy, Economics, *Steel, Manufacturing methods, *Furnaces, Industrial research, Industrial plants, Conferences, *Tempering, High frequency, *Carbides, Alloys.

Contents:
The wide road open to converters, by I. Belobrov
Research with intervals, by L. Shchelkanovtsev
Sortcomings at Orsko-Khalilovo metallurgical combine, by V. Parfenov
Conference on high-frequency tempering of steel of low-tempering capacity, by M. G. Lozinskii
Carbide formation during tempering of alloyed steel: review.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET FERROUS METALLURGY NO. 51. 10 July 62 [24]p. JPRS: 14420.
Order from OTS or SLA $2.60 63-13112

Trans. of Agitator (USSR) 1962, no. 8, p. 34-36; #Metallurg (USSR) 1962 [v. 7] no. 4, p. 1-8.

DESCRIPTORS: *Industrial production, *Metallurgy, Iron, Ores, Minerals, *Magnetic materials, Deposits, *Mining engineering, *Blast furnaces, *Cast iron, *Steel, Smelting, Coal, Coke, Labor, Conferences, Production, Control, Machines, Economics.

Contents:
The Kursk magnetic anomaly, by A. Popov
Progress of the Kuznetsk metallurgical combine, by B. N. Zherebin
Competition of the Kuznetsk, Magnitogorsk, and Nizhnii Tagil metallurgical combines, by N. Milovatskii
Production conference at the Kuznetsk metallurgical combine, by A. N. Glazov and A. D. Kolyvanov
Progress during the first three years of the Seven-Year Plan at the Kuznetsk metallurgical combine, by M. D. Karachentsev and A. F. Egorov.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET FERROUS METALLURGY NO. 55. 25 July 62 [24]p. JPRS: 14590.
Order from OTS or SLA $0.75 63-13113

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 4, p. 3-7; and from Pravda, Moscow (USSR) 1962, 14 May, p. 2.

DESCRIPTORS: Industrial production, *Metallurgy, *Steel industry, Production, Economics, Quality control, Oxygen, Consumption, Iron.

Contents:
Future of metallurgy, by M. Boichenko and others
Steelmaking in oxygen-blown converter, by V. I. Zhigulin.

Andreev, E. I. and others.
THE SPECTROGRAPHIC ANALYSIS OF IRON ORES. Oct 62, 800 words.
Order from HB $2.80 HB-5740

Trans. of #Zavodskaya Laboratoriya (USSR) 1962, v. 28, no. 8, p. 938-940.

DESCRIPTORS: *Iron, *Ores, *Spectrographic analysis, Aluminates, Manganese, Magnesium, Determination.

Belyanchik, L. N. and others.
KINETICS OF GAS EVOLUTION IN (CONSUMABLE ELECTRODE) VACUUM ARC MELTING. Oct 62, 3300 words.
Order from HB $8.50 HB-5438

Trans. of Izvest[iya] V[ysshikh] U[chebnykh] Z[avedenii]. Chern[aya] Met[allurgiya] (USSR) 1961, no. 9, p. 79-86.

DESCRIPTORS: Steel, Melting, Gases, Oxygen, Degasification, *Vacuum furnaces, *Electric furnaces, Electrodes, Vacuum systems.

Billigman, J., Lenze, J., and Schönert, D.
MEASURING THE DEGREE OF REDUCTION IN TEMPER ROLLING. [1960] [33]p. 46 refs.
Order from SLA $3.60 62-16857

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 14, p. 977-989.
Another trans. is available from BISI £8 10s as BISI-1412 [1960].

DESCRIPTORS: *Steel, Processing, *Rolling mills, Drawing (Machine processing), Control, Sheets.

Discussions are presented on: Effect of degree of temper rolling on properties of deep drawing steel strip and packaging strip (i. e. packaging sheet) and sheet; Possible ways for the direct measurement of the properties of the materials, compared with measurement by means of degree of reduction; Measuring strip elongation with a slide caliper rule or continuously by an electrical-mechanical process; Principles of the measuring process and calculation of error; Design and method of working of recent measuring apparatus: types of design, ranges of measurement and application, accuracy of measurement, operational reliability, readings and recordings, maintenance of equipment; Sources of error in transmitting the measured value from the strip to the dial; Effect of speed of temper rolling on degree of reduction and properties of the material; and Possible ways of controlling the degree of temper rolling by means of roll force and strip tension.

Blanter, M. E., Koryagin, K. P., and Martishin, O. V.
PLAIN LOW-CARBON STEELS AS SUBSTITUTES FOR CERTAIN HIGH-STRENGTH ALLOY STEELS. Oct 62.
Order from HB $3.75 HB-5525

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 12, p. 2-7.

DESCRIPTORS: Alloys, Steel alloys, *Steel, Mechanical properties, Heat treatment, Microstructure.

Bogdandy, L. von.
SINTERING, DEGASSING, AND REDUCTION. Pt. 1A of The Kinetics of Iron and Steelmaking Reactions. Oct 62, 4700 words.
Order from HB $11.75 HB-5333

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1961, v. 32, no. 5, p. 275-280.
Another trans. is available from ATS $38.25 in ATS-78N56G [1961] 25p.

DESCRIPTORS: *Reaction kinetics, *Iron, *Steel, *Sintering, Reduction, *Degasification.

Braun, M. P. and others.
NICKEL-FREE STEEL FOR LARGE FORGINGS. Oct 62.
Order from HB $2.00 HB-5527

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 16-17.

DESCRIPTORS: *Forging, *Steel, Production, Heat treatment, Mechanical properties, Tests.

Brüchanov, A.
SOLIDIFICATION OF STEEL IN A MAGNETIC ROTARY FIELD. 12 Aug 48, 2p. (figs. omitted)
Order from SLA $1.10 62-18487

Trans. of Stahl und Eisen (Germany) 1934 [v. 54, no. 43] p. 1110-1111.

DESCRIPTORS: *Steel, *Crystal structure, *Magnetic fields, *Steel castings, Hardening.

Bungeroth, A. and Scheufele, E.
TECHNIQUE OF BENDING THE SECTIONS DURING CONTINUOUS CASTING. Pt. 2 of New Operational and Technical Developments in the Continuous Casting of Steel. Oct 62, 3600 words.
Order from HB $9.60 HB-5697

Trans. of Berg- und Hüttenm[ännische] Monatshefte (Austria) 1962, v. 107, no. 4, p. 82-87.

DESCRIPTORS: *Steel, *Casting, Metallurgy, Cast steel, Deflection, *Elasticity, Temperature.

Burcioiu, I.
THE HEAT TREATMENT OF HIGH SPEED STEEL TOOLS. Nov 62.
Order from BISI £4 5s BISI-2985

Trans. of Metalurgia si Construcţia de Masini (Rumania) 1955, v. 7, no. 12, p. 41-45.

DESCRIPTORS: *Tool steel, Tools, Heat treatment, Carbides.

Chernyak, G. S. and others.
FORMATION OF NITRIDE INCLUSIONS DURING THE HEATING OF CHROME-NICKEL ALLOYS (STEELS) CONTAINING TITANIUM AND ALUMINIUM. Aug 62, 1300 words.
Order from HB $3.75 HB-5609

Trans. of #Stal' (USSR) 1961 [v. 21] Sbornik Statei, p. 455-461.

DESCRIPTORS: *Nitrides, *Clathrate compounds, *Chromium alloys, *Steel, Titanium, Aluminum, Iron industry, *Nickel alloys.

Collette, G.
TRANSIENT INCREASE OF INTERNAL FRICTION IN THE COURSE OF ISOTHERMAL PRECIPITATION OF CARBON IN [AN] IRON-CARBON ALLOY. Nov 62.
Order from BISI £1 5s BISI-3016

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1960 [v. 251] no. 25, p. 2930-2932 (pub. by Gauthier-Villars et Cie., Paris).

DESCRIPTORS: *Iron alloys, *Carbon alloys, Carbon, Precipitation, Friction.

Duflot, J., Durand, J., and Margerie, J. C.
LIFE OF INGOT MOULDS: INVESTIGATION OF SCATTER - PROGRESS TO BE MADE. Nov 62.
Order from BISI £4 5s BISI-2892

Trans. of Revue de Métallurgie (France) 1960, v. 57 [no. 7] p. 573-587.

DESCRIPTORS: *Casting, Dies, Scattering, *Steel.

Eisenhuth, C.
DEVELOPMENTS IN THE MANUFACTURE OF HIGH-STRENGTH (STEEL) WIRE. Oct 62, 4500 words.
Order from HB $12.60 HB-5664

Trans. of Stahl und Eisen (West Germany) 1962, v. 82, no. 14, p. 945-952.

DESCRIPTORS: *Steel wire, Wire, Manufacturing methods, Mechanical properties.

Ermak, I. I.
MECHANIZATION AND AUTOMATION IN THE COAL AND ORE MINING INDUSTRIES. USSR Industrial Development: Soviet Ferrous Metallurgy no. 84. 5 Nov 62 [17]p. JPRS: 16029.
Order from OTS or SLA $1.60 62-33718

Trans. of Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1962 [v. 16] no. 8, p. 1-4.

DESCRIPTORS: *Industrial production *Metallurgy, *Mining engineering, *Coal, *Ores, Production, Automation, Machines.

Frantiu, I.
SIMPLIFIED CALCULATION OF THE AMOUNT OF SCALE FORMED ON CARBON STEEL WHILE BEING HEATED. Oct 62, 1500 words.
Order from HB $5.60 HB-5056

Trans. of Metalurgia si Constructia de Masini (Rumania) 1960, v. 12, no. 10, p. 865-867.

DESCRIPTORS: *Steel, Heat treatment, *Scale, Determination.

Fröber, Heinz.
FUNCTIONS AND ORGANIZATION OF A QUALITY CONTROL DEPARTMENT IN AN IRON AND STEEL WORKS AND ITS IMPORTANCE IN MANAGEMENT. [1960] [27]p.
Order from SLA $2.60 62-16862

Trans. of Stahl und Eisen (West Germany) 1959, v. 79, no. 22, p. 1627-1637 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-679 and 1204). Another trans. is available from BISI £ 7 10s as BISI-1690 [1960].

DESCRIPTORS: *Iron industry, Germany, Quality control, *Steel industry, Statistical analysis, Economics, Management engineering.

Giegerl, E.
COULOMETRIC DETERMINATION OF THE HYDROGEN CONTENT OF STEEL BY THE CARRIER-GAS METHOD. Oct 62, 2600 words.
Order from HB $6.50 HB-5583

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1962, v. 33, no. 7, p. 453-455.

DESCRIPTORS: *Steel, Colorimetric analysis, *Hydrogen, Determination, Carbon dioxide, Chemical reactions.

Grabovetskii, A. P.
FATIGUE STRENGTH OF CHROMIUM-PLATED CONSTRUCTIONAL STEEL. Oct 62, 500 words.
Order from HB $2.80 HB-5749

Trans. of #Metallovedenie i Term[icheskaya] Obrabotka Metallov (USSR) 1962, no. 10, p. 22-23.

DESCRIPTORS: *Steel, *Chromium plating, Beams, Fatigue (Mechanics).

Koike, Y. and others.
SERVICE TESTS ON STEEL-TEEMING NOZZLES OF SPECIAL DESIGN. Oct 62, 1000 words.
Order from HB $4.50 HB-5711

Trans. of Tetsu to Hagane (Japan) 1962, v. 48, no. 4, p. 477-478.

DESCRIPTORS: *Steel, Processing, *Nozzles, Tests.

Martynov, V. P.
IMPROVED DEEP DRAWING OF AUSTENITIC STAINLESS STEELS. Oct 62, 1600 words.
Order from HB $4.80 HB-5593

Trans. of Kuznechno-Shtamp[ovochnoe] Proizvodstvo (USSR) 1961, v. 3, no. 5, p. 11-12.

DESCRIPTORS: *Austenite, *Stainless steel, Drawing (Machine processing), Quality control.

Mitrofanov, A. A.
BASIC OXYGEN STEEL. Oct 62.
Order from HB $2.80 HB-5528

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 12, p. 18-21.

DESCRIPTORS: *Steel, Oxygen, Specifications, Mechanical properties, Corrosion.

Ölsen, W[illy].
THERMODYNAMICS OF IRON ALLOYS. [1962] 13p. (figs. formulae refs. omitted).
Order from SLA $1.60 62-18232

Trans. of Stahl und Eisen (West Germany) 1949, v. 69 [no. 14] p. 468-475.
Another trans. is available from SLA mi$2.40, ph$3.30 in 60-18227 [June 50] 19p.

DESCRIPTORS: *Iron alloys, *Thermodynamics

For abstract see Technical Translations 5: 89, 1961

Parmentier, P.
THE PROGRESS OF SOLIDIFICATION OF MILD STEEL INGOTS IN INGOT MOLDS. [1960] [23]p. 27 refs.
Order from SLA $2.60 62-16858

Trans. of Revue Universelle des Mines (France) 1959 [v. 102] ser. 9, v. 15, no. 11, p. 783-795.
Another trans. is available from BISI £ 5 10s as BISI-1579 [1960].

DESCRIPTORS: Steel, *Steel castings, Heat transfer, Molding, Cooling, Heat, Diffusion, Conductivity, *Cast iron, Temperature, Casting, Computers.

Plettinger, Ernst and Piccinelli, Filippo.
USE OF CHROME-MAGNESITE BRICKS IN COMBINATION WITH PREFABRICATED DOLOMITE BLOCKS. [1959] [8]p.
Order from SLA $1.10 62-14394

Trans. of Atti Notizie [sic] 1959, no. 1, p. 17-19.
Another trans. is available from BISI £ 2 5s as BISI-1475, 1959.

DESCRIPTORS: *Steel, Production, *Electric furnaces, Construction, *Combustion chamber liners, Materials, *Brick, *Dolomite.

For abstract see Technical Translations 3: 318, 1960

Pozdnyak, N. Z. and Ponomarenko, E. K.
STUDY OF CEMENTITE IN IRON-GRAPHITE (POWDER) ALLOYS. Oct 62.
Order from HB $2.50 HB-5532

Trans. of #Metallov[edenie.i] Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1960, no. 12, p. 39-41.

DESCRIPTORS: *Powder alloys, Alloys, *Iron alloys, *Graphite, Powders, *Carbides, Friction, Microstructure, Tests.

Rubtsov, N. N. and others.
PRESS FORMING OF (LIQUID) STEEL. Oct 62, 1600 words.
Order from HB $4.80 HB-5363

Trans. of Liteinoe Proizvodstvo (USSR) 1959, no. 7, p. 17-18.

DESCRIPTORS: *Liquid metals, *Steel, *Metal forming presses, Casting.

Schwabe, G. and Rellermeyer, H.
INVESTIGATIONS INTO THE STRENGTH, REDUCIBILITY AND SOFTENING CHARACTERISTICS OF SINTER. Aug 62, 6700 words.
Order from HB $16.75 HB-5614

Trans. of Stahl und Eisen (West Germany) 1962, v. 82, no. 8, p. 449-457.

DESCRIPTORS: *Sinters, *Blast furnaces, Mechanical properties, Carbon, Oxidation, Calcite.

Shepelyakovskii, K. Z.
CONSTRUCTIONAL STEELS WITH LOW HARDENABILITY. Oct 62.
Order from HB $3.80 HB-5526

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 8-15.

DESCRIPTORS: Construction, *Steel, Production, Hardening, Mechanical properties.

Shmykov, A. A. and Saklinskii, V. S.
EFFECT OF ALLOTROPIC TRANSFORMATIONS ON THE SINTERING OF IRON POWDER. Oct 62.
Order from HB $3.80 HB-5530

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 26-30 and 35-36.

DESCRIPTORS: *Powder metallurgy, *Iron, *Sintering, Transformations.

Smialowski, M.
HYDROGEN IN STEEL. June/July 62, 560p.
Order from Addison-Wesley Pub. Co., Inc., Reading, Mass. $10.00

Trans. of unidentified Polish (?) mono., n. p., n. d.

DESCRIPTORS: *Steel, Chemical analysis, *Hydrogen, Determination, Metallurgy, Solubility, Electrochemistry, Chemical reactions, Physical properties, Welding, Cast iron, Pickling, Electroplating, Corrosion, Fracture (Mechanics), Metals.

Speith, K. G. and Bungeroth, A.
DESIGN AND OPERATION OF CONTINUOUS CASTING PLANTS FOR LARGE (STEEL) SLABS. Oct 62, 6300 words.
Order from HB $16.60 HB-5641

Trans. of Berg- und Hüttenmännische Monatshefte (Austria) 1962, v. 107, no. 4, p. 87-96.

DESCRIPTORS: *Industrial plants, Casting, Design, Operation, *Steel castings, Castings, Production.

Sperner, F. and Persson, G.
PROCESSES IN THE REMELTING OF STEEL IN THE (CONSUMABLE ELECTRODE) VACUUM ARC FURNACE. Oct 62, 4200 words.
Order from HB $9.75 HB-5691

Trans. of Stahl und Eisen (West Germany) 1962, v. 82, no. 16, p. 1099-1105.

DESCRIPTORS: Steel, Processing, Melting, *Vacuum furnaces, *Electric furnaces, Electrodes, *Stainless steel, Metallurgy.

Spiegelberg, K. and Beckmann, G.
PRACTICAL EXPERIENCE GAINED IN THE DETECTION OF DELTA FERRITE IN AUSTENITIC STEELS. Nov 62.
Order from BISI £4 10s BISI-2918

Trans. of Neue Hütte (East Germany) 1962, v. 7 [no. 3] p. 167-174.

DESCRIPTORS: *Steel, *Austenite, *Ferrites, Detection.

Tavadze, F. N. and Kovshikov, E. K.
DIAGRAMS OF ISOTHERMAL AUSTENITE TRANSFORMATION IN DIE STEELS (DATA SHEET). Oct 62.
Order from HB $2.00 HB-5536

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 12, p. 31-33.

DESCRIPTORS: Dies, *Steel, *Austenite, Transformations, Phase studies.

Ushijima, K.
ON THE AIR GAP BETWEEN BILLET AND MOLD. Pt. 6 of Study of the Continuous Casting of Steel. Oct 62, 3100 words.
Order from HB $9.80 HB-5633

Trans. of Tetsu to Hagane (Japan) 1962, v. 48, no. 6, p. 747-752.

DESCRIPTORS: *Steel, *Casting, *Molding, Metallurgy.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET NONFERROUS METALLURGY NO. 25. 10 July 62 [37]p. 9 refs. JPRS: 14422.
Order from OTS or SLA $3.60 63-13109

Trans. of Gornyi Zhurnal (USSR) 1962, no. 1, p. 39-41 and 54-58.

DESCRIPTORS: *Industrial production, *Metallurgy, *Ores, *Mining engineering, Production, Labor, Machines, Automation, Conveyors, Materials, Handling, Hydraulic systems, Transportation, Automatic, Control systems.

Contents:
Potential sources of increased labor productivity at the mines of the Pyshma ore administration, by N. P. Blokh and P. I. Kolupaev
Problems of automation of stoping equipment used in the ore mining industry (discussion of paper by Ya. B. Kal'nitskii and S. P. Vasil'evskii) by S. A. Fedorov and A. A. Bobin
Automatic equipment and controls for the ore mining industry, by L. G. Zhivov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET NONFERROUS METALLURGY NO. 42. 13 Nov 62 [33]p. JPRS: 16143.
Order from OTS or SLA $3.60 63-13084

Trans. of Gornyi Zhurnal (USSR) 1962 [no. 6] p. 6-11; Narodnoe Khozyaistvo Kazakhstana (USSR) 1962 [v. 20] no. 7, p. 58-59; Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 7, p. 3-6; no. 8, p. 5-8; and from Sovetskaya Kirgiziya (USSR) 1962, 27 July, p. 2.

DESCRIPTORS: *Industrial production *Metallurgy, *Antimony, Determination, *Radioactive isotopes, *Ores, *Molybdenum, Deposits, Mining engineering, Labor, Production, Cargo vehicles, Transportation, *Minerals, *Coal, Heat, Power, Water, *Drills, Alloys, Hardening, Microstructure, *Powder metallurgy, *Rare earth elements
Contents:
Isotopes are used in antimony studies, by N. Kolbin
The advanced know-how gained by the Sorskii open-strip ore mine, by T. M. Zonenko and V. A. Frolov
Develop comprehensively the resources of greater Angren, by B. Desyatchikov and Kh. Gazizov
High-strength alloys for drilling tools, by M. S. Polyak
Use of rare earth metals in metallurgy, by V. F. Terekhova and I. V. Burov.

Belyaev, I. F.
THE EFFECT OF NONMETALLIC ADDITIONS UPON THE STRENGTH OF PLATINUM AT HIGH TEMPERATURES (Vliyanie Nemetallicheskikh Dobavok na Prochnost' Platiny pri Vysokikh Temperaturakh). [1962] [16]p. (foreign text included) 1 ref.
Order from OTS or SLA $1.60 62-18184

Trans. of Tsvetnye Metally (USSR) 1957, v. 30, no. 6, p. 57-61.
Another trans. is available from MT $13.60 as MT Trans-54.

DESCRIPTORS: *Platinum, Tensile properties, Additives, Oxides, High temperature research, Plasticity, Corrosion, Grains (Metallurgy), Mechanical properties.

The additions of metal oxides to metal-ceramic Pt allow to increase the strength of such Pt at a temperature of 1200° C several fold, thus e. g. and addition of 0. 05% BaO will lead to a 4. 3- fold increase, and the plasticity and corrosion properties of the Pt are not affected this way. The additions of the metal oxides migrate inside the Pt to the grains, enter these ones and appear at the boundaries of the blocks. The metal-ceramic Pt with metal oxide additions has both a finer block- and finer grain structure in comparison to the same Pt without any additions. It was established by aid of X- ray diagrams that the metal- ceramic Pt with the additions of metal oxides (0. 05% BaO) recrystallizes at a much high higher temperature (550 - 600°C) than the Pt of the same type which carries no additions (450-500°C). At temperatures higher than 600° C the metal- ceramic Pt with metal oxide additions has higher strength limits. The high hot- strength of the metal- ceramic Pt with metal additions must be explained by the high dispersion of these metal oxides, they will deposit along the boundaries and even inside the grains, and will cause both the grain structure and the block structure to become finer. The metal- ceramic Pt with the additions of metal oxides will find application there where Pt must be used at high temperatures. (Author)

Karchevskii, V. A.
SEVERAL RESERVES OF COMPLEX UTILIZATION OF RAW MATERIAL IN NONFERROUS METALLURGY.
Order from OTS or SLA $1.10 62-18265

Trans. of Tsvetnye Metally (USSR) 1959 [v. 32] no. 2, p. 24-27.
Another trans. is available from OTS or SLA mi$2.70, ph$4.80 in 59-11553, JPRS(DC)-L-1674, 25 May 59, 27p.

DESCRIPTORS: *Metallurgy, Lead, Ores, Industrial research, Processing, Slags, Smelting, Production, Economics, Rare earth metals.

Mozzhukhin, E. I., Elyutin, V. P., and Umanskii, Ya. S.
STRENGTH OF CARBIDE-BASE ALLOYS CEMENTED WITH NiAl AND CoAl. 7 Nov 60 [12]p. 5 refs.
MCL-674; AD-256 151.
Order from OTS or SLA $1.60 61-19707

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. [Chernaya Metallurgiya] (USSR) 1960, no. 3, p. 131-135.

DESCRIPTORS: *Alloys, *Carbides, Nickel alloys, Aluminum alloys, Cobalt alloys, Adhesives, *Binders, Bonding, Mechanical properties, Temperature, Effectiveness, Titanium compounds, Tungsten compounds, Tungsten alloys, Titanium alloys.

Attempts were made to determine the effect of the amount of the NiAl binder and its composition on carbide-base alloy properties. Alloys on a TiC base,

cemented by a NiAl binder, had a higher bending strength at 1000 degrees than at room temperature. Alloys based on titanium-tungsten carbide and containing about 16% TiC preserved their strength up to a temperature of between 900 and 1000 degrees when cemented with the NiAl binder. Alloys on a Ti-WC base, when cemented by the CoAl binder were stronger than similar alloys cemented by a NiAl binder. The strength of alloys on a TiC base at room temperature did not depend on the composition of the NiAl binder. At 1000 degrees the composition of the %IAl binder affected the strength of alloys. The composition of the carbide base had a significant effect on the strength of alloys which are cemented by NiAl and CoAl binders. Alloys on a pure TiC base and on a Ti-W base with a large TiC (64% TiC) had great strength at room temperature. However, these alloys maintained and even increased their strength at temperatures of 1000 to 1100 degrees (Author)

Structural Metallurgy and Corrosion

Assmus, F.
EFFECTS PRODUCED BY THE DEFORMATION OF LAMINATED CORES OF MU-METAL. [1962] 4p. ([refs.] figs. tables omitted).
Order from SLA $1.10 62-16917

Trans. of Frequenz (Germany) 1950, v. 4, Aug, p. 193-195.

DESCRIPTORS: *Nickel alloys, *Copper alloys, *Chromium alloys, *Iron alloys, *Manganese alloys, *Magnetic cores, *Laminates, *Deformation, Permeability, Stresses, Elasticity, Radio frequency coils, Communication equipment.

Bergh, Eigge.
MAGNETIC METHOD FOR INVESTIGATION OF STRUCTURE. [1962] 3p. (refs. figs. omitted).
Order from SLA $1.10 62-16928

Trans. of Jernkontoret [Stockholm]. Annaler (Sweden) 1948, v. 132, no. 4, p. 105-109.

DESCRIPTORS; *Metallic crystals, Crystal structure, Magnetic properties, Test methods, *Magnetite.

Dimchev, T.
THE EFFECT OF CORROSIVE WATERS ON ASBESTOS-CEMENT PIPE. [1962] 13p.
Order from ATS $23.75 ATS-87P62B

Trans. of Bulgar[ska] Akad[emiya na] Nauk[ite]. Tekhn[icheskii] Inst[itut]. Izv[estiya] 1955, v. 3. p. 93-108.

DESCRIPTORS: *Pipes, *Cements, *Asbestos, Corrosion, *Corrosive liquids, Water.

Dontsov, P. M.
CRYSTALLINE FRACTURE AS A CRITERION OF BRITTLENESS OF STEELS, tr. by E. Bevitt. 1961 [9]p. 15 refs. DEG Inf. Ser. 107 (C).
Order from OTS or SLA $1.10 62-25402

Trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1959, v. 2, no. 5, p. 28-35.

DESCRIPTORS: *Steel, *Fracture (Mechanics), Nickel alloys, Heat treatment, Mechanical properties, Grains, (Metallurgy), Plasticity, Elasticity, Deformation, Rupture

The paper criticizes the theory that crystalline fracture always indicates a brittle condition in steel. It is shown that even where there is crystalline structure of fracture the metal may have considerable ductility. On the basis of diagrams constructed from data obtained through the static bending of air samples, an explanation is given of the cases in which metal displaying crystalline fracture may have sufficient ductility and of those in which crystalline fracture is necessarily a symptom of the brittle state of steel or an indication that the metal will soon pass into a brittle state. (Author)

Erdmann-Jesnitzer, F. and others.
STUDY OF STRUCTURE OF VERY FINE COPPER WIRES WITH 0.15 TO 0.02 mm DIAMETERS. [1962] 6p. (formulae tables figs. refs. omitted).
Order from SLA $1.10 62-16988

Trans. of Metall (West Germany) 1953, v. 7, no. 7/8, p. 250-254.

DESCRIPTORS: *Copper wire, Drawing (Machine processing), Radiography, Crystals, Scattering, Photoengraving, Dies, *Lattices, *Structures, Mathematical analysis.

Texture of very fine copper wires were tested with particular reference to the independence on the degree of drawing. In agreement with previous work of similar nature there is found a double fiber texture with the two preferred positions of the crystallites along (111) and (100). Of special interest were octrahedron and cube positions, and here the space diagonal and the edge of cube respectively, are parallel to the wire axis. Between the wire axis and the preferred direction there is formed an angle whose maximum lies just below the surface, decreases toward the core of the wire, and at the core itself assumes the value 0. A change in texture with decreasing wire cross section due to increased drawing could not be observed. (Author)

Ilschner-Gensch, Christa.
POTENTIOSTATIC ISOLATION OF STRUCTURAL COMPONENTS IN NICKEL ALLOYS. [1960] [18]p. 14 refs.
Order from SLA $1.60 62-16865

Trans. of Archiv f[ür] d[as] Eisenhüttenwesen (West Germany) 1960, v. 31 [no. 2] p. 97-102 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-288).
Another trans. is available from BISI £4 5s as BISI-1706 [1960].

DESCRIPTORS: *Nickel alloys, Chemical analysis, *Chromium alloys, Heat treatment, Microstructure.

For abstract see Technical Translations 4:118, 1960

Köster, W. and Rauscher, W.
RELATIONSHIPS BETWEEN THE MODULI OF ELASTICITY OF BINARY ALLOYS AND THEIR STRUCTURE. 17 Mar 49, 12p. (figs refs. omitted)
Order from SLA $1.60 62-18404

Trans. of Z[ei]ts[chrift] f[ür] Metallkunde (West Germany) 1948 [v. 39, no. 4] p. 111-120.

DESCRIPTORS: *Alloys, *Crystal structure, Eutectics, Intermetallic compounds, *Elasticity, Lattices, Phase studies, Chemical bonds.

A comprehensive review is given with respect to the concentration dependence of the modulus of elasticity of binary alloys. An investigation was made of continuous mixed crystal series, limited mixed crystal series, eutectic alloy series and alloys with intermetallic phases. The most important structural systems were selected for examination in order to gain the best bases for the relationships between lattice structure, type of bonding, and elastic behaviour. (Author)

Lysenko, H. H. and Afanas'ev, O. S.
THE ADSORPTION MECHANISM OF THE ACTION OF CERTAIN ACID CORROSION INHIBITORS. 5 Dec 62 [11]p. 6 refs. JPRS: 16516
Order from OTS or SLA $1.10 63-13272

Trans. of Akademiya Nauk URSR, Kiev. Dopovidi, 1961, no. 8, p. 1049-1051.

DESCRIPTORS: *Corrosion inhibition, Acids, Additives Amines, Formaldehyde, Ammonia, Adsorption, Polarization.

A scheme for visual representation of the relationship between types and magnitudes of adsorption, types of additives and polarization potential is presented. (Author)

Lyubchenko, A. P. and Ermolaev, V. I.
EFFECT OF CERIUM UPON THE SELF-DIFFUSION OF IRON. Oct 62, 1100 words.
Order from HB $3.30 HB-5734

Trans. of #Fizika Metallov i Metallovedenie (USSR) 1962, v. 14, no. 1, p. 157-160.

DESCRIPTORS: *Iron, Diffusion, Microstructure, *Autoradiography, Labeled substances, *Cerium.

Neumann, E. and Kofler, H.
STEEL WIRE PATENTING STRUCTURE IN THE ELECTRON MICROSCOPE. Nov 62.
Order from BISI £9 BISI-2887

Trans. of Radex-Rundschau (Austria) 1961, no. 6, p. 747-773.

DESCRIPTORS: *Steel wire, Lead, Microstructure, Electron microscopy.

Sifferlen, R.
THE STRUCTURE OF THE IRON-IRON OXIDE INTERFACE AND THE INSOLUBILITY OF OXYGEN IN HIGH-PURITY IRON. I. STUDY OF THE FORMATION OF FERROUS OXIDE ON THE SURFACE OF THE METAL; II. INFLUENCE OF IMPURITIES IN THE METAL; III. STUDY OF STRUCTURE UNDER THE ELECTRON MICROSCOPE. Oct 62, 41 refs.
Order from BISI £10 BISI-2924

Trans. of Ministère de l'Air. Publications Scientifiques et Techniques: Notes Techniques (France) 1961, no. 104, p. 3-51.

DESCRIPTORS: *Metals, Surfaces, *Iron compounds, Oxides, Impurities, *Microstructure, Electron microscopes, Oxygen, Solubility, *Oxygen.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

YUGOSLAV REGULATIONS AND INSTRUCTIONS ON NUCLEAR AFFAIRS. 30 Oct 62 [19]p. JPRS: 15946.
Order from OTS or SLA $1.60 63-13077

Trans. of Sluzbeni List, Belgrade (Yugoslavia) 1962 [v. 18] no. 31, p. 646-651.

DESCRIPTORS: *Radioactive isotopes, Instruction manuals, *Yugoslavia, Transport, Handling, Laboratories, *Personnel, Training, Medical examination, Toxicity, Dosage, Safety devices, Shielding.

Contents:
On the use and traffic of radioactive elements whose degree of radiation is above the pre-determined level of activity
On qualifications of personnel working with radioactive elements
On medical examinations of persons working at the source of ionizing radiation
On the categorization of laboratories for work with open radioactive elements as related to their degree of radiotoxicity
On the allowed amounts of ionizing radiation to which the persons working at the sources of ionizing radiation may be exposed.

Chiotan, C., Dema, I. and others.
PREPARATION OF I-131 WITH HIGH SPECIFIC ACTIVITY. July 62 [3]p. 22 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Revista de Chimie (Rumania) 1961 [v. 12] no. 12, p. 706ff.

DESCRIPTORS: *Radiochemistry, *Radioactive isotopes, *Iodine, *Tellurium, Radioactive decay, Tellurium compounds, Oxides, Thermal neutrons, Gamma rays, Evaporation, Ion exchange resins.

Dyad'kin, I. G.
THREE DIMENSIONAL ANGULAR AND ENERGY DISTRIBUTION OF NEUTRONS IN MULTI-COMPONENT UNBOUNDED MEDIA. [1961] [25]p. (1 fig. omitted) 11 refs.
Order from OTS or SLA $2.60 AEC-tr-4707

Trans. of mono. Prostranstvenno-Energeticheskoe Uglovoe Raspredelenie Neitronov v Mnogokomponentnykh, Vklyuchaya Vodorov, Bezgranichnykh Sredakh, Moscow, 1960 [p. 1-28].

DESCRIPTORS: *Nuclear cross sections, Neutron age, Reactor moderators, *Well logging, Integral transforms, *Oils, Deposits, Fast neutrons, Sources, Neutron counters, Rock, Porosity, Water, Hydrogen, Continuous media.
In the present paper we bring to the numerical stage the exact solutions of the kinetic equation for the moderation of neutrons. By generalizing the procedure of these calculations, we give new universal formulas for the calculation of the three-dimensional energy and angular distribution of neutrons in multi-component media, including those with variable range. The latter are simple in structure and, in particular, replace the age, asymptotic and other approximations. The numerical results have been obtained for ordinary reactor moderators and for media which are of interest in neutron logging of oil wells. (Author)

Dzhelepov, B. S., Prikhodtseva, V. P., and Khol'nov, Yu. V.
ISOBARIC NUCLEI WITH THE MASS NUMBER A=140. No. 5 of International Series of Monographs on Nuclear Energy, Div. 2, Nuclear Physics Properties of Atomic Nuclei. June/July 62, 200p.
Order from PP approx. $6.00

Trans. of mono. [Izobarnye Yadra s Massovym Chislom A 140, Moscow, 1960, 97p.].

DESCRIPTORS: *Nuclei, Atomic mass unit, Atomic number, Chemical elements, Xenon, Cesium, Barium, Lanthanum, Cerium, Praseodymium, Neodymium, Promethium, Samarium, Radioactive isotopes, Nuclear physics, *Nuclear isobars.

Grigor'ev, E. P.
ISOBARIC NUCLEI WITH THE MASS NUMBER A=73. No. 6 of International Series of Monographs on Nuclear Energy, Div. 2, Nuclear Physics Properties of Atomic Nuclei. June/July 62, 56p.
Order from PP approx. $1.50

Trans. of mono. [Izobarnye Yadra s Massovym Chislom A=73, Moscow/Leningrad, 1960].

DESCRIPTORS: *Nuclei, Atomic mass unit, Atomic number, Chemical elements, Gallium, Germanium, Arsenic, Selenium, Radioactive isotopes, Radioactive decay, Nuclear physics, *Nuclear isobars.

Krause, I. Y. and Lüders, G.
NUCLEAR RESONANCE ABSORPTION WITH FROZEN-UP RECOIL (MÖSSBAUER EFFECT) (Kernresonanzabsorption mit Eingefrorenem Rückstoss (Mössbauereffekt)). [1962] [21]p. (7 figs. 10 refs. omitted).
Order from SLA $2.60 62-16557

Trans. of die Naturwissenschaften (West Germany) 1960, v. 47 [no. 23] p. 532-536.

DESCRIPTORS: *Nuclear resonance, Absorption, Spectrographic analysis, *Recoil atom, Quantum mechanics, Atomic energy, Levels, Lattices.

Nesmeyanov, A. N., Borisov, E. A.
SECONDARY REACTIONS OF Br^{82} AND Br^{80m} RECOIL ATOMS IN BROMOMETHANES, tr. by E. W. Hooper. May 60 [17]p. 13 refs. NP-tr-554; [DSIR] NLL M. 3054.
Order from OTS or SLA $1.60 62-23991

Trans. in manuscript of Radiokhimiya (USSR) 1959, v. 1, no. 6, p. 712-716.

DESCRIPTORS: *Bromine, *Radioactive isotopes, *Recoil atom, Stabilization, *Bromides, *Methanes, Chemical reactions.

Pak, Z. P. and Bulatova, T. I.
DISTRIBUTION OF A LABELED PREPARATION OF BOTULISM TOXIN IN THE BODY OF WHITE MICE. 23 Nov 62 [9]p. 10 refs. JPRS: 16309.
Order from OTS or SLA $1.10 63-13260

Trans. of #Farmakologiya i Toksikologiya (USSR) 1962, v. 25, no. 4, p. 478-482.

DESCRIPTORS: Distribution, *Labeled substances, *Botulism toxoid, Mice, *Tissues (Biology).

Growing of Cl. botulinum on a nutritive medium containing S^{35}-methionine makes possible the obtainment of a labelled preparation of type B botulism toxin with a firm fixation of the radiotag. Investigation of the distribution in the organism of white mice of the labelled toxin preparation following its intravenous administration, showed that it penetrates rapidly into the tissues of the lungs, liver, heart, muscles, brain, and intestines. The highest concentration of the radiotag takes place in the lungs. The lowest radioactivity level is found in the blood at all investigation periods. During 150 minutes, following intravenous administration of the labelled botulism toxin preparation, a redistribution of radioactivity takes place in the organism of white mice with a periodic reduction of the radiotag concentration in some organs and its increase in others. (Author)

Springer, T.
SCATTERING OF SLOW NEUTRONS IN WATER, ICE, AND WATER VAPOR (A REVIEW). [1962] 41p.
Order from ATS $39.75 ATS-56P62G

Trans. of Nukleonik (West Germany) 1961, v. 3, no. 3, p. 110-131.

DESCRIPTORS: *Thermal neutrons, *Neutron scattering, *Water, *Ice, *Water vapor.

Nuclear Engineering and Power

AIR-WATER SEPARATION EXPERIMENTS: FINAL RESULTS. Quarterly report, 16 Oct 60-15 Mar 61, on CAN-1 Contract; Pt. A of Technical report. [1962] 48p. Ansaldo LAB/STU 1451.
Order from OTS or SLA $4.60 EURAEC-99

Trans. of a rept. from Ansaldo S. p. A., Genoa (Italy) 25 Mar 61.

DESCRIPTORS: *Air, *Water, Separation, Pressure, *Gas flow, *Fluid flow, High pressure research, Instrumentation, Centrifuge separation, Flowmeters.

A detailed description of the high-pressure loop and its instrumentation is given. (Author)

DESIGN AND CONSTRUCTION OF A FACILITY FOR AIR-WATER MIXING AND SEPARATION EXPERIMENTS Special report no. 1. [1962] 87p. Ansaldo LAB/STU 1416.
Order from OTS or SLA $8.10 EURAEC-49

Trans. of a rept. from Ansaldo S. p. A., Genoa (Italy) 10 June 60.

DESCRIPTORS: *Heat exchangers, Design, Construction, *Reactor coolants, Air, Water, Mixtures, Separation, Fluid flow, Velocity, Pipes, Instruments, Pitot tubes, Capacitors.

Adorni, N., Berkowitz, L. and others.
DESIGN AND CONSTRUCTION OF A FACILITY FOR HEAT TRANSFER EXPERIMENTS WITH WET STREAM. Special rept. no. 1. [1962] [69]p. CISE Rept. R 23.
Order from OTS or SLA $6.60 EURAEC-41

Trans. of rept. from Centro Informazioni Studi Esperienze, Milan (Italy) July 60.

DESCRIPTORS: *Heat exchangers, *Heat transfer, Steam, *Hydraulic systems, Pipes, Boilers, Pressure regulators, *Electrical equipment, Power supplies, Switches, Control systems, Test equipment, Flowmeters, Pressure gages, Temperature sensitive elements, Electrometers, *Programming, Coding.

A heat transfer facility designed to permit measurements of heat transfer, burnout, and pressure drop phenomena in two phase flow of steam-water mixtures is described in detail. The facility is a once-through system and it has been operated successfully. The computer code developed to reduce the data obtained, an analysis of experimental errors and the facility's operating manual are also presented. (Author) (See also 62-33191)

Crambes, J. and Volterras, J.
INFLUENCE OF CENTRIFUGAL TWISTED TAPES ON FREON BURN-OUT FLUX: REVIEW OF TEST. Special rept. no. 4 on Contract [017-60 RDF]. [1962] 73p.
Order from OTS or SLA $7.60 EURAEC-145

Trans. of a rept. from Société Nationale d'Étude et de Construction de Moteurs d'Aviation, Suresnes (France) 27 June 61.

DESCRIPTORS: *Heat transfer, Liquids, *Refrigerants, Boiling, *Vortices, Test methods, Tests, Boiling water reactors, Nuclear reactors.

Enel'yanov, V. F.
ATOMIC SCIENCE AND ENGINEERING OF HUNGARY. 20 Nov 62 [6]p. JPRS: 16264.
Order from OTS or SLA $1.10 63-13306

Trans. of Akademiya Nauk SSSR. Vestnik, 1962 [v. 32] no. 8, p. 82-84.

DESCRIPTORS: *Atomic energy, *Atomic energy engineering, Nuclear physics, Radiochemistry, Radioactive isotopes, Nuclear reactors, Cosmic rays, Plastics industry, Reactor moderators, Organic compounds, *Hungary.

Kanno, M. and Kokubo, S.
PYROMETALLURGICAL PROCESSING OF NUCLEAR FUELS BY MOLTEN ZINC. [1962] 9p.
Order from ATS $17.00 ATS-42P63J

Trans. of Nihon Genshiryoku Gakkaishi (Japan) 1962, v. 4, no. 1, p. 30-36.

DESCRIPTORS: *Reactor fuels, Processing, Liquid metals, Zinc, *Metallurgy, Heat treatment.

Ivanov, A. N. and Pravdyuk, N. F.
INFLUENCE OF NEUTRON IRRADIATION ON THE ELECTRIC RESISTANCE OF CERTAIN METALS, tr. by Marcel I. Weinreich. 14 July 61 [36]p. 10 refs.
Order from OTS or SLA $3.60 SCL-T-371

Trans. of mono. Vliyanie Neitronnogo Oblucheniya na Elektrosoprotivlenie Nekotorykh Metallov, Moscow, 1960.

DESCRIPTORS: *Neutrons, Radiation effects, Metals, *Iron, *Nickel, *Zirconium, *Titanium, *Molybdenum, *Tungsten, Electrical resistance, Annealing.

The influence is investigated of neutronic irradiation at a temperature between 40° and 50°C in the "RFT" reactor on the magnitude of the specific electroresistance of iron, nickel, zirconium, titanium, molybdenum, and tungsten. In a number of metals (Fe, Ni, Zr) there is

observed the inception of the saturation of the increase rate of the specific electroresistance, whereby an analogous situation takes place also for those samples of these metals which had been subjected to a cold deformation up to 90% and 95% prior to irradiation. Preliminarily deformed samples entail, as a result of the irradiation, an increase of specific electroresistance which is both relatively and absolutely lower in comparison with the samples of identical metals in an annealed (tempered) state. The kinetics were studied of the isochronous annealing in the increase of specific electroresistance for a number of metals. The measurement of the increase in the specific electroresistance for specimens of iron, titanium and zirconium, irradiated in an annealed state, is carried out in one stage and is terminated at temperatures ranging between 250° and 450°C. In this instance, a rise of the integral dose of irradiation entails an augmentation of temperature at which takes place a full measurement of the increase of electroresistance that had been induced by irradiation.

Mihail, A. and Bernhard, B.
STUDY OF TWO-PHASE ADIABATIC FLOWS. Special rept. no. 2. [1962] 65p.
Order from OTS or SLA $6.60 EURAEC-54

Trans. of a rept. from Société Nationale d'Étude et de Construction de Moteurs d'Aviation, Suresnes (France) 21 Dec 60.

DESCRIPTORS: *Adiabatic gas flow, Gas flow, Fluid flow, Vortices, Pressure, Reduction, Cylindrical bodies, Hydrodynamics, Tests, Boiling water reactors Nuclear reactors.

This report comprises three principal parts. In the first part the experimental installation used in the course of the tests, as well as the operation of the methods of measuring the pressure drops and the average velocity of the liquid in the tube are described. In the second part the results of a series of tests effected in cylindrical flow with liquid alone in order to study and compare the pressure drops with and without twisted tape are shown. The object of the third part is the experimental study of two-phase flows.

Pravdyuk, N. F., Kuznetsov, V. N., and Laletin, N.
ISOTHERMIC IRRADIATION OF NON-FISSIONING MATERIALS INSIDE THE HEATING PARTS OF A RESEARCH REACTOR, tr. by A. L. Monks. [1961] [14]p. 4 refs.
Order from OTS or SLA $1.60 AEC-tr-4763

Trans. of mono. Izotermicheskoe Obluchenie Nedelyashchikhsya Materialov Vnutri Teplovydelyayushchikh Sborok RFT, Moscow, 1960, [16p].

DESCRIPTORS: *Research reactors, Nuclear reactors, *Reactors materials, Heating, *Gamma rays, Absorption, Aluminum, Steel, Tin, Lead, Radiation effects, Heat exchangers, Heat transfer, Gamma ray spectra.

The generation of heat in non-fissioning materials, irradiated in an active zone of a reactor by the absorption of γ-irradiation energy is examined. A curve showing the dependence of the mass energy absorption coefficient of γ-rays on the atomic number of an element for a spectrum of a reasearch reactor is given. A description is given of a stationary method for determining the heat liberation, q, per unit mass of samples from non-fissioning materials irradiated inside heat liberating apparatuses. The results obtained for aluminum, steel 30, tin, and lead are within the $2.2 \text{ to } 3.7 \frac{VT}{G}$ when the diameters of the long cylindrical samples are 13.5 and 10 mm and when the reactor capacity is 10 Mvt. The spatial course q along the height of the channels within the active zone is similar to a consinosoidal one. A method is described which can be used for the isothermic irradiation of samples and containers at temperatures above that of the heat carrier. (Author)

Richter, H., Wincierz, P., and Zwicker, U.
[INVESTIGATION ON] ALLOYS OF ZIRCONIUM WITH NIOBIUM AND/OR SILICON WITH A VIEW TO THEIR USE AS CLADDING MATERIAL IN WATER-COOLED NUCLEAR REACTORS. Quarterly rept. no. 6, 1 July-30 Sep 61 and technical rept. to pt. 2 "Length Variations in Zirconium Alloys caused by Thermal Cycling", on Contract EUR/C/262/2/60 d (009-60-4 RDA). [1962] 28p. 10 refs.
Order from OTS or SLA $2.60 EURAEC-201

Trans. of a rept. from Metallgesellschaft A.G., Frankfurt a.M. (West Germany) 10 Oct 61.

DESCRIPTORS: *Light water reactors, *Fuel elements, *Fuel cladding, Materials, *Zirconium alloys, Niobium alloys, Silicon alloys, Alloys, Temperature, Thermal expansion, Tests, Nuclear reactors.
Tests were carried out on ZrNb3Sn1 and Zircaloy-2 seamless tube sections to determine whether thermal cycling between 20 and 350° C can bring about permanent changes in length. It appears that a slight increase in the length of the tubes is to be observed in tube sections annealed at temperatures between 575 and 1000° C. In cold-drawn tubes the thermal cycling result in the case of both alloys in contraction of 0.05-0.1% at cold-drawing degrees of 20-27% irrespective of the annealing temperature. The contraction is caused by recovery processes, and is mostly achieved after one heating. In the case of other textures, e.g., rolling, texture-conditioned length variations can, however, occur which are not dependent on the number of the preceding thermal cycles. (Author)

Tolstaya, M. A., Gradusov, G. N., and Bogatyreva, S. V.
THE EFFECT OF ELECTROPOLISHING ON THE CORROSION STABILITY OF 1Cr18Ni9T STAINLESS STEEL AND CARBON STEEL-20 IN WATER AT HIGH TEMPERATURES. [1961] [15]p. 7 refs.
Order from OTS or SLA $1.60 AEC-tr-4698

Trans. of mono. Vliyanie Elektropolirovki na Korrozionnuyu Stoikost' Stali 1KH18N9T i Uglerodistoi Stali-20 v Vode pri Vysokikh Temperaturakh, Moscow, 1960 [14p.].

DESCRIPTORS: *Electrolytic polishing, *Stainless steel, Steel, Carbon, *Corrosion, Stability, Water, High temperature research, *Nuclear power plants.

The corrosion rate of 1Cr18Ni9T stainless steel, carbon steel and a steel alloy with different surface treatments was investigated in water at a temperature of 310°C and a pressure of 100 atmospheres. It was

shown that samples of electropolished 1Cr18Ni9T stainless steel tubing, in spite of the poor quality of the electropolishing, were twice as corrosion resistant as samples having an ordinary unpolished surface. It was shown that the corrosion rate of carbon steel-20 is lowered significantly on electropolishing the surface. Mechanical polishing is not as effective as electropolishing. A study of the corrosion kinetics under these conditions leads to the conclusion that the corrosion resistance of steel can be estimated from the data of accelerated tests (300 to 700 hours) by extrapolating the corrosion losses to a given time. The corrosion resistance of a mechanically polished steel alloy containing 5% chromium and 2% molybdenum can hardly be distinguished under these conditions from the corrosion resistance of mechanically polished carbon steel-20 at testing periods of up to 300 hours. (Author)

Vella, S. and Zavattarelli, R.
FINAL RESULTS OF STEAM-WATER MIXING AND SEPARATION EXPERIMENTS: PHASES DISTRIBUTION AND SEPARATION EFFICIENCY. Final rept. 15 July-15 Sep 61. [1962] 107p. Ansaldo LAB/STU 1469.
Order from OTS or SLA $9.10 EURAEC-209

Trans. of a rept. from Ansaldo S.p.A., Genoa (Italy) 15 Oct 61.

DESCRIPTORS: *Steam, *Water, Mixtures, Separation *Gas flow, *Fluid flow, Cooling, Pressure, Phase studies, Tests, Enthalpy, Temperature.

The tests were performed at a test pressure of 49 Kg/cm^2 abs, at mass velocities of 150, 200, 250, and 300 $g/cm^2 sec$, and steam qualities of 20, 30, 40, and 60 %. The test tube was a steel tube 3000-mm long, 42 mm I D. The injection velocity of the water was 3+13 m/sec. according to the water flow-rate. It was found that the ratio between the local mass velocities of the mixture and the average mass velocity of the mixture depends only on the average steam quality; the same seems to be for the local mass velocity of the steam. (Author)

PHYSICS

NUCLEAR EFFECTS ON THE PROPAGATION OF ELECTROMAGNETIC WAVES: ANNOTATED BIBLIOGRAPHY, 1958-June 62. Rept. on AID Work Assignment no. 44. 1 Oct 62 [33]p. 114 refs. AID rept. 62-155; AD-285 328.
Order from OTS or SLA $3.60 62-33375

DESCRIPTORS: *Electromagnetic waves, *Propagation, *Radiation effects, Abstracts, *Bibliography.

The 114 entries are arranged alphabetically by author.

Korolev, F.
P. N. LEBEDEV AND THE LATEST PROBLEMS OF MODERN PHYSICS. 18 June 62 [7]p. FTD-TT-62-855; AD-285 837.
Order from OTS or SLA $1.10 62-32980

Unedited rough draft trans. from Pravda [Moscow] (USSR) 1962 [no. 73(15929)] 14 Mar, p. 6.

DESCRIPTORS: Scientific personnel, *Scientific research, *Physics, Light transmission, Electromagnetic waves, Ultrasonics.

Kukanov, A. B.
CERENKOV RADIATION EMITTED BY MAGNETIC AND ELECTRIC DIPOLES. 16 Feb 62 [10]p. 29 refs. FTD-TT-61-448.
Order from OTS or SLA $1.10 62-23679

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Fizika (USSR) 1961, no. 2, p. 28-33.

DESCRIPTORS: *Cerenkov radiation, Magnetic fields, Electric fields, Magnetic moments, Dipole moments, Complex variables, Differential equations, Electromagnetic fields.

The problem of Cerenkov radiation emitted by magnetic and electric dipoles moving in a medium with complex ε and μ is investigated. Radiation emitted by the dipoles of a point system first of electrical and then (formally) of magnetic charges and currents is examined.

Kurgaev, V. V. and Smagina, A. K.
MEASUREMENT OF THE DIELECTRIC PARAMETERS OF A POLAR FLUID AS A FUNCTION OF TEMPERATURE BY THE METHOD OF A CYLINDRICAL INHOMOGENEITY IN A WAVEGUIDE. [1960] 5p. 8 refs. MDF K-228.
Order from OTS $0.50 62-11482

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedeni]. Fizika (USSR) 1960, no. 1, p. 135-138.

DESCRIPTORS: *Waveguides, Theory, *Methanols, *Ethanols, Dielectric properties, Measurement, Temperature.

A new waveguide method, developed and described by LeBot and Le Montagner is used herein to measure the dielectric parameters of a polar fluid as a function of the temperature. The results obtained of measurements of the complex dielectric permeability of methyl and ethyl alcohol in the -60 to $+50^{\circ}C$ temperature range at a 3.22-cm wavelength confirm the logic of using this method for similar investigations. (Author)

Electricity and Magnetism

Kiloskova, N. G. and Kopvillem, U. Kh.
MAGNETIC RESONANCE LINE WIDTH IN DILUTE PARAMAGNETIC SINGLE CRYSTALS WITH ANISOTROPIC g-FACTOR. [1960] 8p. 7 refs. MDF K-237.
Order from OTS $0.50 62-11458

Trans. of Izvestiya V[ysshīkh] U[chebnykh] Z[avedenii]. Fizika (USSR) 1960, no. 3, p. 223-229.

DESCRIPTORS: *Single crystals, Paramagnetic crystals, *Lanthanum compounds, Ethyl radicals, Sulfides, *Neodymium, Ions, *Paramagnetic resonance, Resonance adsorption, Dipole moments, Tensor analysis.

A formula is obtained for the computation of the fourth moment of the paramagnetic resonance curve in crystals with magnetically-equivalent ions which have the effective spin $\frac{1}{2}$ and an anisotropic spectroscopic splitting factor. All the internal interactions in paramagnetics are taken into account, which can be described as a tensor operator dependent on the spin variables of two paramagnetic ions. As an example, tensor operators are presented of dipole-dipole and anisotropic exchange interactions. A comparison is made with experiment for the Nd^{3+} ion in a lanthanum ethyl sulfate single crystal. (Author)

correct experimental determination of the quantity Δn and to extrapolate this dependence to zero diameter. A correspondence was established between the change in ΔH of polycrystalline ferrites as a function of the sample shape and the theoretical results. (Author)

Kirenskii, L. V., and Veter, V. V.
INVESTIGATION OF THE INTER-DOMAIN BOUNDARIES IN FERROMAGNETS. [1961] 10p. 4 refs.
MDF K-245.
Order from OTS $0.50 62-11316

Trans. of Izv[estiya] V[ysshikh] U[chebnykh] Z[avenii]. Fizika (USSR) 1960, no. 4, p. 183-189.

DESCRIPTORS: *Ferromagnetic materials, *Iron, *Silicon, Ferroelectric crystals, *Single crystals, Magnets, *Magnetic fields, Polarization, Boundry layer, Optics.

The interdomain partitions in single crystals of silicon iron with a 3% silicon content have been investigated by using the magnetooptic Kerr effect. The investigations conducted show that the polarity of the boundaries can be different. the width of the boundary layers is not stable and fluctuates between 0.6 - 0.9 μ for 180° neighbors. (Author)

Kirko, I. M.
SIMILARITY AND PHYSICAL SIMULATION METHODS IN THE INVESTIGATION OF ELECTROMAGNETIC PROCESSES IN LIQUID METALS. [Oct 60] 12p. 5 refs.
MDF K-222; AFCRL-TN-60-1129.
Order from OTS $0.50 62-11480

Trans. of mono. Vopr[osy] Magn[itoi] Gidrodin[amiki] i Din[amiki] Plazmy, Riga, 1959, p. 202-213 with added comments by D. A. Frank-Kamenetskii and the author.

DESCRIPTORS: *Magnetohydrodynamics, Hydrodynamics, Thermal conductivity, *Liquid metals, Electromagnetic properties. Simulation, Fluid flow.

Kotyukov, Yu. N. and Smokotin, E. M.
MEASUREMENT OF THE FERROMAGNETIC RESONANCE ABSORPTION LINEWIDTH IN POLYCRYSTALLINE FERRITES. [1961] 6p. 7 refs. MDF K-244.
Order from OTS $0.50 62-11314

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Fizika (USSR) 1960, no. 4, p. 173-177.

DESCRIPTORS: *Ferrites, Magnesium, Chromium, Crystals, Ferromagnetism, Paramagnetic resonance, *Resonance absorption, Measurement, Klystrons.

An experimental study was conducted on the influence of the size and shape of ferrite samples on the width of the ferromagnetic resonance curve. It is shown that it is necessary to record the dependence of the ferromagnetic resonance curve width on the diameter of the sphere, in the case of using spherical samples, for a

Molecular Physics and Spectroscopy

Laqua, K. and Hagenah, W. D.
SPECTROCHEMICAL ANALYSIS WITH TIME RESOLVED SPECTRA OF SPARK DISCHARGES. [1962] [27]p. 22 refs.
Order from SLA $2.60 62-16684

Trans. of Spectrochem[ica] Acta (Gt. Brit.) 1962, v. 18, no. 2, p. 183-199.

DESCRIPTORS: Spectrographic analysis, *Chemical analysis, *Electric discharges, Sparks, Time, Resolution (Optics), *Copper electrodes, Aluminum, Zinc, Brass, Generators.

Slonim, I. Ya.
NUCLEAR MAGNETIC RESONANCE IN HIGH POLYMERS. [1962] 51p.
Order from ATS $34.50 ATS-97P62R

Trans. of #Usp[ekhi] Khim[ii] (USSR) 1962, v. 31, no. 5, p. 609-655.

DESCRIPTORS: *Polymers, *Nuclear resonance, Paramagnetic resonance.

Veits, I. V. and Gurvich, L. V.
THE DISSOCIATION ENERGY OF MAGNESIUM, CALCIUM, STRONTIUM AND BARIUM OXIDES. [1962] 25p. (figs. omitted) 31 refs.
Order from OTS or SLA $2.60 62-18331

Trans. of Optika i Spektroskopiya (USSR) 1956, v. 1, no. 1, p. 22-33.

DESCRIPTORS: *Barium compounds, *Strontium compounds, *Calcium compounds, *Magnesium compounds, Oxides, Dissociation, Reaction kinetics, Flames, Molecular association, Stereochemistry, Atomic energy, Spectrographic analysis, Thermodynamics.

The equilibrium dissociation constants of oxides of the alkaline earth metals in flames of C_2H_4 + air, C_2H_2 + O_2, H_2 + air and H_2 + O_2 were determined through a study of the intensity of the resonance lines of the metal atoms in the flame. (Author)

Vorob'ev, A. A., Savintsev, P. A., and Ufimtsev, B. F.
THE IONIZATION POTENTIAL OF ATOMS AND THE MUTUAL SOLUBILITY OF METALS. [1962] 4p. 2 refs.
Order from OTS or SLA $1.10 AEC-tr-5177

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Fizika (USSR) 1960, no. 3, p. 233-234.

DESCRIPTORS: *Metals, Solubility, *Atoms, Ionization potentials.

Optics

Fabrikant, V. A.
RAYS TO THE COSMOS (Luch Idet v Kosmos).
10 Sep 62 [39]p. FTD-TT-62-867; AD-286 622.
Order from OTS or SLA $3.60 62-33643

Unedited rough draft trans. of Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politicheskikh i Nauchnykh Znanii. [Seriya 9] (USSR) 1961 [no. 8] 31p.

DESCRIPTORS: *Optics, *Thermal radiation, *Light, Photons, *Electromagnetic waves, Absorption, Detection, Sources, Buildings, Elevators, Temperature, Chromium, Ions, Ruby, Crystals, Helium, Neon, Atoms, Infrared radiation, Space flight, Satellite vehicles.

Contents:
The strange fate of a certain discovery of A. Einstein
What occurs in the interior of a heated body
The principle of minute equilibrium and the use of an elevator in an apartment house
The juggler's art and negative temperature
From words to action
The volleying of light beams and a new means of generating light
An energy bank for chromium ions and the light generator
"Kind" helium atoms and greedy" neon atoms
Harmonious labor of radiating atoms in a light generator
On the earth and in the cosmos

Jacquinot, Pierre and Dufour, Charles.
OPTICAL CONDITIONS IN THE USE OF PHOTOELECTRIC CELLS IN SPECTROGRAPHS AND INTERFEROMETERS [Conditions Optiques d'Emploi des Cellules Photoélectriques dans les Spectrographes et Interferomètres] tr. by Aubrey Kempner and Arthur B. Shafer. 24 Apr 62, 48p.
Order from OTS or SLA $4.60 62-24775

Trans. of [Centre National de la Recherche Scientifique, Paris. Journal des Recherches (France) 1948, v. 2, no. 6, p. 91-103].

DESCRIPTORS: *Photoelectric cells, *Spectrophotometers, *Interferometers, Optics, Photographic plates, Luminescence, Resolution (Optics), Photomultipliers

Sedlacek, B.
DETERMINATION OF THE REDUCED INTENSITY OF LIQUID STANDARDS. Pt. 3 of Scattering of Light. [1962] 9p.
Order from ATS $16.50 ATS-63P64C

Trans. of Chem[icke] Listy (Czechoslovakia) 1953, v. 47, p. 1591-1597.

DESCRIPTORS: *Light, Scattering, Liquids, Standards.

Solid State Physics

Botvinkin, O. K. and Vorob'eva, O. B.
THE EFFECT OF GAMMA IRRADIATION ON CERTAIN PROPERTIES OF CURRENT-CONDUCTING FILMS.
28 Mar 62 [4]p. FTD-TT-62-414.
Order from OTS or SLA $1.10 62-24919

Unedited rough draft trans. of Steklo i Keramika (USSR) 1962 [v. 19] no. 1, p. 4.

DESCRIPTORS: *Semiconducting films, Electrical conductance, *Gamma rays, Radiation effects, Electrical properties.

Challande, R., Hantel, L., and Montgomery, D.
THE ORIGIN OF CHARGES ACQUIRED BY CRYSTALS THROUGH FRICTION WITH METALS. [1962] 2p.
Order from ATS $2.85 ATS-36P65F

Trans. of [Academie des Sciences, Paris]. Compt[es] Rend[us] (France) 1962, v. 254, p. 3834-3835 (pub. by Gauthier-Villars et Cie., Paris).

DESCRIPTORS: *Crystals, *Static electricity, *Friction, *Metals, Solid state physics.

Frolov, V. M., Krylov, O. V., and Roginskii, S. Z.
CATALYTIC PROPERTIES OF GERMANIUM. [1962] 8p. 16 refs.
Order from OTS or SLA $1.10 AEC-tr-4979

Trans. of Problemy Kinetiki i Katal[iza] (USSR) 1960, v. 10, p. 102-107.

DESCRIPTORS: *Germanium, *Catalysis, *Semiconductors, Surface properties, *Hydrazines, Decomposition, Catalysts, Reaction kinetics.

Gromakov, S. D.
METHODS OF CALCULATING THE PROPERTIES OF POLYCOMPONENT SYSTEMS OF ANY DIMENSION FROM DATA ON BINARY SYSTEMS, I, tr. by Bertha P. Klenova. 1 Feb 61, 20 p. 3 refs. TVA-3896.
Order from OTS or SLA $2.60 62-24456

Trans. of #[Zhurnal Fizicheskoi Khimii] (USSR) 1960, v. 34, p. 2431-2447.

DESCRIPTORS: *Crystal structure, Mathematical analysis, *Analytical geometry.

Methods of deriving equations for the properties of nonreciprocal systems of any dimension from data on binary systems have been described and equations of composition have been presented. Problems connected with the determination of the number of figurative points in a regular (m - 1) dimensional simplex, have been examined, as well as the dependence between the ordinal number of the figurative points and the coordinates of the simplex and also the numeration of the points in given sections by hyperplanes. (Author)

Khlystov, A. S. and Petrakovski, G. A.
INFLUENCE OF COPPER AND COBALT ADMIXTURES ON THE CHARACTERISTICS OF NICKEL-CHROMIUM FERRITES. [1960] 8p. 15 refs. MDF K-234.
Order from OTS $0.50 62-11461

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Fizika (USSR) 1960, no. 1, p. 222-227.

DESCRIPTORS: *Microwaves, *Ferrites, Magnetic properties, Paramagnetic resonance, *Copper alloys, Cobalt alloys, Nickel alloys.

The basic requirements are considered which ferrites must satisfy for the low-frequency microwave band. The influence of small copper and cobalt admixtures on the characteristics of nickel-chromium ferrites with low saturation magnetization and high Curie temperature is investigated. Optimum admixtures are found to obtain ferrites with minimum ferromagnetic resonance curve width. Nickel-chromium-cobalt ferrites with a Curie temperature of 400°C are proposed as being suitable for use in resonance isolators of the 10-cm band. (Author)

Khlystov, A. S. and Smokotin, E. M.
MAGNESIUM-CHROMIUM-COPPER FERRITES FOR THE LOW PORTION OF THE MICROWAVE BAND. [1960] 5p. 8 refs. MDF K-232.
Order from OTS $0.50 62-11483

Trans. of Izvestiya V[ysshikh] U[chebnykh Z[avedenii]. Fizika (USSR) 1960, no. 2, p. 157-160.

DESCRIPTORS: *Microwaves, Wave analysis, *Ferrites *Magnesium alloys, *Chromium alloys, Paramagnetic resonance, Ferromagnetism

The influence of copper admixtures on the microwave characteristics of a magnesium-chromium ferrite $MgFe_{1.36}Cr_{0.64}O_4$ has been investigated. It is shown that a 20% molar substitution of copper for magnesium diminishes the width of the ferromagnetic resonance curve to 150 Oe while retaining the other characteristics of the magnesium-chromium ferrite. Ferrites with a relatively low synthesis temperature (1200° C) and a narrow resonance line width suitable for use in the decimeter radiowave band are proposed. (Author)

Khlystov, A. S. and Zhilyakov, S. M.
MAGNETIC CHARACTERISTICS OF LITHIUM-ALUMINUM FERRITES. [1960] 4p. 6 refs. MDF K-231.
Order from OTS $0.50 62-11484

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avadenii]. Fizika (USSR) 1960, no. 2, p. 151-153.

DESCRIPTORS: *Ferrites, *Lithium alloys, *Aluminum alloys, Magnetic properties, Temperature, Ions, Crystal structure.

Magnetic characteristics are presented of the ferrites $Li_{0.5}Fe_{2.5-a}Al_aO_4$. It is shown that the saturation magnetization varies within broad limits as a changes from zero to one. The Curie temperature here varies slightly: from 640 to 470° C. The change in the magnetization is in agreement with the assumption that the aluminum ions occupy octahedral positions. (Author)

Kramareva, S. A. and Stafeev, V. I.
STUDY OF SOME PROPERTIES OF "LONG" DIODES. [1962] [3]p. 4 refs. [DSIR] NLL M. 4831.
Order from OTS or SLA $1.10 62-24875

Trans. of #Fizika Tverdogo Tela (USSR) 1960, v. 2, no. 2, p. 377-379.

DESCRIPTORS: *Semiconductors, *Diodes, Electrical properties, Photoelectric effect.

Kolomiets, B. T.
GLASS-LIKE SEMICONDUCTORS. [1960] 9p. 51 refs. MDF K-240.
Order from OTS $0.50 62-11324

Trans. of Vsesoyuz[noe] Khim[icheskoe] Ob[shchestvo]. Zh[urnal] (USSR) 1960, v. 5, no. 5, p. 553-557

DESCRIPTORS: *Glass, Metals, Copper, Gold, Silver, Zinc, Cadmium, Mercury, Gallium, Indium, Thallium, Germanium, Tin, Lead, *Chalcogenides, Physical properties, Electrical properties

Levshin, V. L.
THE LUMINENCENCE OF CRYSTALLINE SUBSTANCES. [1962] (figs. refs. omitted) 23 refs.
Order from OTS or SLA $2.60 AEC-tr-5110

Trans. of [Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya] 1945, v. 9, p. 355-368.

DESCRIPTORS: *Crystals, *Luminescence, *Phosphors, Benzenes, Nitrogen, Uranyl radicals, Manganese, Chromium, Rare earth elements, Platinum compounds, Cyanides, Atomic energy levels, Spectrographic analysis.

The aim of the present paper is to analyze recent experimental data and from them sketch the probable outlines of the luminescence process in solid crystalline bodies. (Author)

Ribalka, V. V. and Pereverseva, A. V.
EFFECT OF HEAT TREATMENT ON MAGNETORESISTANCE OF GERMANIUM. Oct 62, 500 words.
Order from HB $2.50 HB-5729

Trans. of Ukr[ayins'kyi[Fiz[ychnyi] Zhurnal (USSR) 1961, v. 6, no. 3, p. 424-425.

DESCRIPTORS: *Semiconductors, *Germanium, Heat treatment, Hardening, Magnetic properties, Resistance.

Rybalko, F. P. and Rybalko, B. F.
GROWING SINGLE-CRYSTAL FOILS OF PRESCRIBED CRYSTALLOGRAPHIC ORIENTATION. [1960] 3p. MDF R-123.
Order from OTS $0.50 62-11579

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Fizika (USSR) 1960, no. 5, p. 169-170.

DESCRIPTORS: *Zinc, Single crystals, Crystals, *Foils, Growth, Crystallization.

Tatarinova, L. I. and Kazmazovskaya, T. S.
DETERMINATION OF THE CLOSEST APPROACH OF ATOMS BY THE ELECTRONOGRAPH METHOD IN AMORPHOUS INDIUM SELENIDE, tr. by Bertha P. Klenova, 22 Jan 62, 5p. 8 refs. TVA-3973.
Order from OTS or SLA $1.10 62-24464

Trans. of #Kristallografiya (USSR) 1961, v. 6, p. 668-670.

DESCRIPTORS: *Indium, *Selenides, Crystal structure, Atoms, Fourier analysis.

The method of integral analysis of the experimental intensity curve was applied to the construction of a curve of radial distribution of amorphous InSe. The values found were: $r_1 = 2.60$, $r_2 = 3.16$, $r_3 = 4.22$ A. The number of the nearest atoms from the first two coordination spheres is 4.23, if it is assumed that the density of amorphous InSe is 10% lower than that of the crystalline compound. The tetrahedral arrangement of indium was determined. The volume of the dispersion regions was found from the half-width of the maxima of the experimental intensity curve to be about 350 $\AA^3$. The closest approach was found to be the same as that in the crystalline InSe lattice. (Author)

Thomas, Harry.
OUTER PHOTOELECTRIC EFFECT OF ALKALI METALS. I. ITS THICKNESS DEPENDENCE FOR POTASSIUM: RANGE OF THE PHOTON IN THE METAL. [1962] [33]p. 47 refs.
Order from SLA $3.60 62-16689

Trans. of Zeit[schrift für] Phys[ik] (West Germany) [1957] v. 147, p. 395-418.

DESCRIPTORS: *Alkali metals, *Photoelectric effect, *Potassium, Thin films, Volume, *Photons, Distribution, *Plasma physics.

Earlier work was continued by measuring the thickness dependence of the photoelectric emission of thin layers of potassium evaporated in highest vacuum onto a quartz support at low temperature. Measurements were made at constant irradiation at wave lengths between 289 mμ and 578 mμ. It is concluded from the measurements that the outer photoelectric effect for potassium over the whole spectral region investigated is a volume effect. The depth from which photoelectrons emerge has been determined from the type of the thickness dependence. Its great wave length dependence (about 2 atomic layers at λ = 300 mμ to about 200 atomic layers at λ = 500 mμ) is related to a strong energy dependence of the excited electron range determined by the interaction of electrons with electrons. It is shown that new ideas about the electron-electron interaction in metals (Plasma theory) make possible a satisfactory understanding of this property. (Author)

Theoretical Physics

Gubanov, A. I.
BAND THEORY OF THE ONE-DIMENSIONAL MODEL OF LIQUID METAL (Zonnaya Teoriya Odnomernoi Modeli Zhidkosti) tr. by V. N. Pavloff. 1962, 15p. 7 refs. NRCC Technical trans. 1045.
Order from NRCC $1.00 NRCC C-4097

Trans. of Zh[urnal] Eksperim[ental'noi] i Teor[eticheskoi] Fiz[iki] (USSR) 1954, v. 26, no. 2, p. 139-149 Another trans. is available from OTS or SLA $1.60 as AEC-tr-4737, 61-27906, July 61, 16p.

DESCRIPTORS: Metals, *Semiconductors, Conductivity, Melting, Atomic spectrum, Atoms, Distribution, Electrons, Quantum mechanics, Energy.

For abstract see technical translations 6:798, 1961.

Sinel'nikov, K. D., Safronov, B. G. and others.
PROPAGATION OF PLASMOIDS IN A FIELD-FREE SPACE. [1961] [23]p. 6 refs.
Order from OTS or SLA $2.60 AEC-tr-4728

Trans. of mono. Rasprostranenie Plazmennykh Sgustkov v Svobodnom ot Polei Prostranstve, Khar'kov, 1960 [p. 158-161].

DESCRIPTORS: *Plasma physics, Propagation, Sources, Ions, Plasma oscillations, Oscilloscope probes, Gas discharges.

Thermodynamics

Bagdasaryan, S. S.
TEMPERATURE DEPENDENCE OF HEAT OF VAPORIZATION AND SURFACE TENSION OF LIQUIDS. [1962] 5p.
Order from ATS $6.25 ATS-98P64R

Trans. of Akad[emiya] Nauk Azerb[aidzhanskoi SSR, Baku]. Dokl[ady] 1961, v. 17, no. 9, p. 773-777.

DESCRIPTORS: Temperature, Thermodynamics, Heat, *Vaporization, *Surface tension, *Liquids,

Basevich, V. Ya. and Kogarko, S. M.
THE EFFECT OF OXYGEN ATOMS ON COMBUSTION AT LOW PRESSURES. July 62 [3]p. 10 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1961, v. 141, no. 3, p. 659-[661].

DESCRIPTORS: *Flame propagation, Combustion, Oxygen, Propanes, Butanes, *Hydrocarbons, Pressure.

Bernard, J.-J.
THE THERMAL RESISTANCE OF CONTACTS [La Resistance Thermique des Joints]. [1962] [19]p. (5 figs. refs. omitted). AD-221 409.
Order from SLA $1.60 62-14456

Trans. of Advisory Group for Aeronautical Research and Development, Paris. Report (France) no. 212, Oct 58 [16]p.

DESCRIPTORS: *Joints, *Heat transfer, Physical properties, Resistance, Temperature, Thermocouples.

A description was presented of an apparatus constructed at O.N.E.R.A., Paris for studying the thermal contact resistance between conductors or between conductors and insulators and the extent to which this varies as a result of the tightening pressure. The measurement conditions differ from those in the various investigations of a similar nature previously undertaken mainly in the fact that the thickness of the test piece is not sufficient to permit the use of thermocouples and all temperature measurements have to be made outside the materials examined. A description is given of the measurement methods applicable in this case and of the relevent instruments used, and results of recent tests are quoted. (Author)

Bogatykh, S. A. and Reut, E. A.
A STUDY OF HEAT TRANSFER PROCESSES IN THE LIQUID COOLING OF A GAS IN CYCLONE-FOAM EQUIPMENT. July 62 [4]p. 3 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskoe] Mashinostroenie (USSR) 1961 [v. 3] no. 6, p. 21-[24].

DESCRIPTORS: *Heat transfer, Mass transfer, Gases, Cooling, *Foams, Thermal conductivity, Density, Viscosity, Diffusion, Temperature.

Buikov, M. V. and Dukhin, S. S.
DIFFUSIONAL AND THERMAL RELAXATION OF EVAPORATING DROPS. July 62 [5]p. 7 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1962 [v. 5] no. 3, p. 80ff.

DESCRIPTORS: *Evaporation, Diffusion, Thermodynamics, Heat transfer, Integral transforms.

Gel'man, L. I.
HEAT EXCHANGE BY DROP CONDENSATION OF MERCURY VAPOR [Teploobmen pri Kapel'noi Kondensatsii Rtutnogo Para]. 1962, 8p.
Order from MUL $8.50 MUL-T62-2

Trans. of Teploenergetika (USSR) 1958, v. 5, no. 3, p. 47-50.

DESCRIPTORS: *Heat exchangers, *Mercury, Vapors, Condensation, Power plants, Heat transfer.

Khlebnikova, V. N., Morozova, N. K., and Morozov, V. P.
DETERMINATION OF THE ERROR IN CALCULATING THERMODYNAMIC FUNCTIONS IN A HARMONIC OSCILLATOR APPROXIMATION. [1960] 6p. 4 refs. MDF K-233.
Order from OTS $0.50 62-11462

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Fizika (USSR) 1960, no. 1, p. 217-221.

DESCRIPTORS: *Harmonic oscillators, Simulation, Thermodynamics, Vibration, Specific heat, Energy, Numerical analysis, Errors.

The problem is considered of determining the error in the vibrational components of thermodynamic functions calculated by methods of statistical thermodynamics under the assumption of harmonic oscillations. It is shown that the errors related to the presence of errors in the physical constants are insignificant. A method for the rapid computation of the error in the specific heat, the reduced internal energy and the reduced free energy is reported. (Author)

Kozachenko, L. S.
INFLUENCE OF STREAM PULSATIONS ON THE TURBULENT RATE OF FLAME PROPAGATION. [1960] 7p. 7 refs. MDF K-223.
Order from OTS $0.50 62-11464

Trans. of A[kademiya] N[auk] SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izvestiya: E[nergetika] i A[vtomatika] 1959, no. 2, p. 21-25.

DESCRIPTORS: *Flame propagation, Turbulence, Oscillations, Anemometers, *Glow discharges, Generators, Circuits.

The mechanism of flame propagation in a turbulent stream is analyzed. A burner is described which permits mounting of various turbulizing apparatus by which the degree of turbulence, ε can vary from 1.7 to 15.7%. The measurement of the turbulent characteristics by an anemometer with a glow discharge and by a thermo-anemometer showed the inertia of the glow discharge for pulsation frequencies up to 20 kc and the possibility of using it under laboratory conditions. An experimental estimate of the role of the stream pulsations in flame transfer along a burning mixture is established. Certain results of measuring stream pulsations due to different turbulizing apparatus under conditions of isothermal flow and the combustion of a well-mixed fuel-air mixture are presented. It is shown that the turbulent flame rate can be represented as the sum:

$$u_T = u_n + u' + u''$$

where u_n is the normal flame propagation rate, u' the mean-square pulsation of the isothermal stream; u" additional pulsation generated by the flame. The installation had an apparatus to measure the air and fuel consumption and a Toepler Camera for moving-picture recording of the size of the combustion zone by a serial spark discharge. (Author)

Krichevskii, I. R., Khazanova, N. E. and others.
DIFFUSION IN GASES AT HIGH PRESSURES. July 62 [8]p. 30 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1962, no. 2 [p. 105-111].

DESCRIPTORS: Gases *Nitrogen, *Carbon dioxide, Diffusion, Mass transfer, High pressure research, Phase studies.

Noninski, Kh. I.
APPLICATION OF A NEW METHOD FOR ESTIMATING THE ACTIVATION ENERGY. July 62 [4]p. 7 refs.
Order from ICE in v. 2, no. 3, $15.00/year

Trans. of Khimiya i Industriya (Bulgaria) 1961 [v. 33] no. 6, p. 179ff.

DESCRIPTORS: *Vaporization, Energy, Thermodynamics, Condensation, Equations of state.

Schäfer, Rall and Wirth-Lindemann.
THERMODYNAMIC INVESTIGATIONS ON THE SYSTEM ACETONE-n-HEPTANE AND ACETONE-n-NONANE. [1962] [10]p. (figs. tables omitted) 12 refs.
Order from SLA $1.10 62-16759

Trans. of Zeitschrift für Physikalische Chemie [Frankfurt] (West Germany) 1958 [neue folge] v. 14 [no. 3/4] p. 197-207.

DESCRIPTORS: *Thermochemistry, Thermodynamics, *Phase studies, *Acetones, *Heptanes, *Nonanes, Evaporation, Vapor pressure.

The evaporation equilibria of the two binary systems acetone-n-heptane and acetone-n-nonane were investigated in a by-pass apparatus in the range 0 to 50°C. The data obtained out of the measurements for calculating the activity coefficient were corrected with respect to the real behavior of the gas phase and with respect to the dependency of the chemical potential on the equilibrium pressure. At the higher temperatures the real gas correction turned out to be not at all negligible. Probably in the case of acetone-n-heptane at 0°C., whose vapor pressure was so low, the real gas correction was negligible. (Author)

Sirota, A. M. and Belyakova, P. E.
ON THE CALORIC PROPERTIES OF WATER AT PRESSURES UP TO 500 $^{kg}/_{cm^2}$ AND TEMPERATURES UP TO 300°C. [1959] 6p. 18 refs. MDF S-138.
Order from OTS $0.50 62-11333

Trans. of Teploenergetika (USSR) 1959, v. 6, no. 10, p. 67-70.

DESCRIPTORS: *Water, *Heat transfer, High pressure research, High temperature research, Pressure, Temperature.

New experimental data on the c_p of water are compared with results of measurements by other authors and with the results of calculating c_p according to p, v, T data. The enthalpy of water has been computed for pressures up to 500 $^{kg}/_{sq\ cm}$ and temperatures to 300°C. (Author)

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

Eliseev, V. K. and Kovalevskii, V. A.
STUDY OF AN ALGORITHM FOR THE RECOGNITION OF MACHINE-WRITTEN SYMBOLS. Foreign Developments in Machine Translation and Information Processing no. 111. 26 Nov 62, 14p. 3 refs. JPRS: 16343.
Order from OTS $0.50 63-11502

Trans. of Zhurnal Vychislitel'noi Matematiki i Matematicheskoi Fiziki (USSR) 1962, v. 2, no. 5, p. 902-911.

DESCRIPTORS: *Machine translation, Data processing systems, *Pattern recognition, Reliability, Digital computers, Computers, Programming, Typewriters, Printing, Reading.

The present article describes investigations of an algorithm for the recognition of standard symbols with an extremely high degree of reliability. On the basis of this algorithm it is conjectured that all symbols of a definite script, for example the script of a typewriter, represent certain idealized, standard symbols that are subjected to a distortion. The image of a symbol may be different from the corresponding standard on account of displacement, uniform darkening, or a change in contrast. In addition, noise is superimposed on the image, i.e. separate points, independent of the others, can be darker or lighter than the corresponding points of the standard. It is assumed that all of these distortions are describable by simple statistical relations. The probability of errors in reading the first copy of a text has an order of less than 10^{-4}. The reliability in reading typewritten copies is significantly larger than in other described methods of recognition. The probability of errors is of the order of 10^{-4}

Gorelov, V. and Sabel'nikov, I.
NEW ELECTRONIC EQUIPMENT FOR THE PRINTING INDUSTRY. Foreign Developments in Machine Translation and Information Processing no. 110. 21 Nov 62, 3p. JPRS: 16292.
Order from OTS $0.50 63-11501

Trans. from Komsomol'skaya Pravda (USSR) 1962, 11 Aug.

DESCRIPTORS: *Machine translation, *Printing, *Electronic equipment, Electrophotography, Electronic recording systems, Films.

Kirillov, N. E. and Fatkin, L. V.
EXPERIMENTS IN THE RECOGNITION OF SPEECH SOUNDS BY AUTOMATIC MACHINES. Foreign Developments in Machine Translation and Information Processing no. 107. 17 Oct 62, 13p. 10 refs. JPRS: 15754.
Order from OTS $0.50 62-11785

Trans. of Voprosy Psikhologii (USSR) 1962 [v. 8] no. 3, p. 45-55.

DESCRIPTORS: *Speech, Intelligibility, *Speech transmission, *Speech representation, *Data transmission systems, Digital computers, Computers, Memory devices, Machine translation, Control systems, Sound.

Lazarev, V. G. and Piyl', E. I.
CONCERNING SOME CLASSES OF FINITE AUTOMATA. 23 Nov 62 [13]p. 10 refs. JPRS: 16306.
Order from OTS or SLA $1.60 63-13259

Trans. of Zhurnal Vychislitel'noi Matematiki i Matematicheskoi Fiziki (USSR) 1962, v. 2, no. 4, p. 695-702.

DESCRIPTORS: Differential equations, Control systems, *Cybernetics, Matrix algebra, Metamathematics.

Classes of finite automata are defined and a method of reducing the number of their internal states is proposed. A generalized class of finite automata is defined.

Communication Theory

HERALD OF COMMUNICATIONS, 1962 [VOL. 22] NO. 8(269). 6 Nov 62 [156]p. JPRS: 16061.
Order from OTS or SLA $11.50 62-33715

Trans. of Vestnik Svyazi (USSR) 1962 [v. 22] no. 8(269).

DESCRIPTORS: Periodicals, *Communication systems, *Communication equipment, Satellite vehicles, Television communication systems, Safety, *Postal systems, Labor, Telephones, Urban areas, Rural areas, *Radio communication systems, Automation, Remote control systems, Radio transmitters, Recording devices, Reflectors, Tuning devices, Direction finding, *Television, Maintenance, Agriculture, Telegraph systems, Telegraph signals, Transmission, Reading, *Radio broadcasting, Newspapers, *Printing, Radio equipment, Television equipment, Sound reproduction systems, Personnel.

Contents:
For the further technical progress of electrocommunication facilities (editorial)
An automated remote-controlled transmitter of the type PK-1A, by S. S. Pustovoitovskii
Equipment for recording the cost of calls in automatic long distance telephone service, by V. A. Godlevskii
A device for remote tuning of reflectors of cophasal band antennae, by G. V. Shuvaev
A route finder, by V. A. Lomanovich
Mechanization and automation of money-order and other cash operations at the communications enterprises, by A. M. Sal'nikov and N. V. Karaseva
What is preventing Moscow television repair shops from improving the service to the population? by B. A. Voronov
To the new agricultural organizations -- special attention, by N. V. Strelkov
Organization of communication service for production administrations, by I. V. Bulygin
Sovkhozes are served by the departmental mail carriers, by S. G. Glinyano
Pension payments without pension books, by I. I. Mokhov
Complaints, their causes and measures for prevention
How to learn to read perforated tape, by M. V. Artamonov
On the expansion of decentralized newspaper printing, by G. A. Yurasovskii and A. I. Pashkina
To the communications industry -- skilled personnel
A collective is marching toward tomorrow, by L. A. Andreev
The "radio electronics and electrocommunication" pavilion at the exhibition of the national economy achievements
Electric standards for planning rediffusion networks, 3d ed: review of book by A. A. Vdovichenko and I. A. Morozov

USSR COMMUNICATIONS: [SELECTED] TRANSLATIONS NO. 25. 13 Nov 62 [15]p. JPRS: 16151.
Order from OTS or SLA $1.60 63-13081

Trans. of 18 selected articles from June-Sep 62 issues of 12 Russian newspapers.

DESCRIPTORS: *Communication systems, *Television transmitters, Television, *Television stations, Microwave relay systems, Postal systems, Telephone lines, *Telephones, Towers, Video signals, Transmission, Facsimile communication systems.

Contents:
Tashauz TV reception
First photo-telegraph in Moscow Oblast
Moldavian photo-telegraph
New communication departments
Television ring for Kazakhstan, by V. Larin
New TV center in Barnaul
For televiewers of Southern Ural
Magnitogorsk television station, by I. Kamenev
Rabkory (labor correspondent) report, by B. Monastyrev
Television relay station in Zherdevka
Development of TV network in the Belorussian SSR
International post office
Tbilisi-Telavi: telephone lines
New telephone station in Tbilisi, by A. Vashakidze
Construction of the Leningrad TV tower, by B. Kharin
Ukraine receives foreign TV programs, by Ya. Petrov
Automations sort out letters
Construction of TV centers should be expedited, by A. Shkulev.

Condrea, S.
METHODS OF INCREASING THE CAPACITY OF TELEPHONIC TRANSMISSIONS. 15 Nov 62 [12]p.
JPRS: 16204.
Order from OTS or SLA $1.60 63-13101

Trans. of Telecommunicatii (Rumania) 1962, v. 6, no. 4, p. 145-150.

DESCRIPTORS: *Telephone communication systems, Telephone lines, *Telephone signals, Signals, Transmission, *Multiplex transmission, Frequency, Communication systems.

Increase in the information capacity of the telephone signal, through compression of the available frequency band, can be effected by influencing either the simplex or the multiplex signal. Analysis of various methods used thus far reveals that a much greater reduction of the frequency band is achieved in the first case than in the second, but at the expense of numerous and complicated items of equipment. (Author)

Photographic Equipment

Goldovskii, E.
FUSION OF FLICKER IN MOTION PICTURE PROJECTION. FLICKER IN INTERMITTENT ILLUMINATION OF A SURFACE. [1962] 13p.
Order from ATS $21.50 ATS-53P62R

Trans. of Kinomekhanik (USSR) 1961, no. 9, p. 21-29.

DESCRIPTORS: *Motion picutre projectors, Illumination, Oscillations, Surfaces.

Salamandra, G. D., Naboko, I. M., and Sevast'yanova, I. K.
PULSE SOURCE OF FREQUENTLY REPEATING LIGHT FLASHES. 7 Mar 60 [8]p. 9 refs. USASIA SC-59jj/59; JPRS: R-455-D.
Order from OTS or SLA $1.10 62-32733

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1959, no. 2, p. 124-127.

DESCRIPTORS: *High speed photography, Lighting systems, *Flash lamps, Light pulses, *Pulse generators.

Two types of demountable pulse lamps of original design operating in a mode of frequently repeating flashes are described. The frequency of exposure in the use of these lamps can come to 100,000 - 150,000 frames/second. The delay between frames does not exceed 5 . 10^{-7} seconds. (Author)

SOCIAL SCIENCES

Fyodorov, M. Ya. and Kryukova, I. P.
HANDBOOK OF RUSSIAN VERBS, tr. ed. by C. V. James. June/July 62, 280p.
Order from PP linen-bound about $3.00
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Trans. of unidentified mono., Moscow, n.d.

DESCRIPTORS: *Handbooks, Language.

ANNALS OF THE GREAT SOVIET ENCYCLOPEDIA, 1957-61, QUINQUENNIAL ED.: TABLE OF CONTENTS. 1962, 1v.
Order from Telberg, V. G., 544 6th Ave., New York

Trans. of table of contents of Bolshaya Sovetskaya Entsiklopediya. Ezhegodnik (USSR) 1957-61, quinquennial ed.

DESCRIPTORS: *History, *Encyclopedias

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BR-SOV/6041
Gamynin, Nikolay Sergeyevich
FUNDAMENTALS OF HYDRAULIC SERVOS (Osnovy sledyashchego gidravlicheskogo privoda) Moscow, Oborongiz, 1962. 292 p. Errata slip inserted. 11,000 copies printed.

BR-SOV/6047
Braynes, Samuil Natanovich, Anatoliy Viktorovich Napalkov, and Vladislav Borisovich Svechinskiy
NEUROCYBERNETICS (Neyrokibernetika) Moscow, Medgiz, 1962. 170 p. 10,000 copies printed.

BR-SOV/6048
Yel'yashevich, Mikhail Aleksandrovich
ATOMIC AND MOLECULAR SPECTROSCOPY (Atomnaya i molekulyarnaya spektroskopiya) Moscow, Fizmatgiz, 1962. 892 p. 9,000 copies printed.

BR-SOV/6049
Arsen'yev, Yuriy Dmitriyevich
ANALYSIS OF THE THERMODYNAMIC CYCLE OF ATOMIC POWER STATIONS BY THE BASE-POINT METHOD (Analiz termodinamicheskogo tsikla atomnykh elektrostantsiy metodom bazovoy tochki) Moscow, Gosatomizdat, 1962. 134 p. 2,500 copies printed.

BR-SOV/6054
Kondrat'yev, Kirill Yakovlevich
METEOROLOGICAL RESEARCH BY MEANS OF ROCKETS AND SATELLITES (Meteorologicheskiye issledovaniya s pomoshch'yu raket i sputnikov) Leningrad, Gidrometeoizdat, 1962. 251 p. 3,000 copies printed.

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96p.

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Mono. Zemlya-Kosmos-Zemlya, Moscow, 16 Aug 62, 96p.

JOINT STABILITY AND REGULATION QUALITY CONTROL AND ITS APPLICATION IN STATISTICAL DYNAMICS [AND] MECHANIZATION OF ANALYSIS PROCESSES AND OF THE STRUCTURE SYNTHESIS OF SWITCHING CIRCUITS.
Mono. Statisticheskie Metody Issledovaniya. Teoriya Struktur, Modelirovanie, Terminologiya Obrazovanie, v. 3, Moscow, 1961, p. 106-124, 357-367 (International Federation of Automatic Control Congress no. 1, Moscow, 1960).

PROPERTIES OF SOLUTIONS OF ORGANIC ACIDS IN HYDROCARBON LIQUIDS AT SOLID SURFACES [AND] NEW EXPERIMENTAL DATA ON SURFACE FRICTION.
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PL-480 Vestnik [Sel'skokhozyaistvennoi] Nauki (USSR) 1960 [v. 5] no. 7, p. 62-65.

Avaste, O. and others.
SPECTRAL DISTRIBUTION OF DIRECT SOLAR AND DIFFUSE RADIATION (Spektral'noe Raspredelenie Pryamoi i Rasseyannoi Radiatsii).
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ON THE APPLICATION OF PRE-SOWING X-RAY RADIATION IN AGRICULTURE [Ob Ispol'zovanii v Sel'skom Khozyaistve Metoda Predposevnogo v Oblucheniyu Semyan].
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Mono. Vibratsionnoe Gorenie, Moscow, 1961, p. 13-111, 344-375.

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NAVIGATIONAL DEVICES.
Mono. Navigatsionnye Ustroistva, Moscow, 1961, 615p.

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For basic list of Periodicals Translated Cover-to-Cover see Technical Translations Volume 9 , Number 1.

This basic list is kept up-to-date by giving only changes in the subsequent issues of Technical Translations.

No changes are necessary for this issue.